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Original Articles.

TUBERCULOSIS OF THE TESTICLE.

WITH SPECIAL CONSIDERATION OF ITS CONSERVATIVE TREATMENT.

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CHICAGO.

Before entering into our subject, let us briefly review the anatomy and physiology of the testicle, that we may better understand the pathologic changes and processes of repair which take place when it is the seat of tubercular infection.

The testes are suspended in the scrotum by the two spermatic cords, the left being slightly lower than the right. Each is oval in form, compressed laterally, and occupies an oblique position in the scrotum, the upper extremity being directed forward and outward, and the lower downward and a little inward. The surface of the gland, excepting its posterior border, is free, smooth and covered by the visceral layer of the tunica vaginalis. Lying along the posterior border is a narrow flattened body, the epididymis, which consists of three parts, namely, first, the upper enlarged extremity, globus major; second, the pointed lower extremity, globus minor, and, third, the intermediate portion, or body of the epididymis. The globus major is intimately connected with the upper end of the testicle proper by means of its efferent ducts, while the globus minor is attached to its lower end by cellular tissue and a reflection of the tunica vaginalis. This membrane, the tunica vaginalis, as it leaves the testicle proper at its posterior border, is reflected on to the epididymis, covering its outer surface and upper and lower extremities and completely investing the body, excepting along its posterior border, from which it is again reflected on to the inner surface of the scrotum. It will thus be seen that a sort of mesentery is formed by the membrane between the testicle proper and the epididymis. Attached to the upper end of the testicle or epididymis are one or more small pedunculated bodies, the most constant of which is called the "hydatid of Morgagni."

Besides the tunica vaginalis, which is the most external, the testis is invested by two tunics, the tunica albuginea and the tunica vasculosa. The tunica albuginea is beneath the serous coat and surrounds the glandular structure of the testis. It is thick and dense, and composed of white fibrous tissue. At the posterior border of the gland it is reflected into the interior, forming an incomplete vertical septum, the mediastinum testis, or corpus Highmorianum, from the edge and lateral surfaces of which numerous fibrous trabeculæ pass, to be attached to the inner surface of the tunica albuginea. These trabeculæ divide the interior of the gland into a number of cone-shaped spaces, the bases of the cones being at the periphery and the apices at the mediastinum. The tunica vasculosa consists of a plexus of blood-vessels, which line the inner surface of the tunica albuginea and the fibrous trabeculæ.

The glandular structure of the testis (Fig. A) consists of numerous cone-shaped lobules (lobuli testis), each contained in one of the spaces described above and composed of one or more convoluted tubules, 2¼ feet in length and 1/150 inch in diameter, the convolutions being held together by an intertubular connective tissue. The connective tissue presents large interstitial spaces lined with endothelium, the rootlets of the lymphatic vessels, and masses of large cells—the interstitial cells—accompanying the finer blood-vessels.

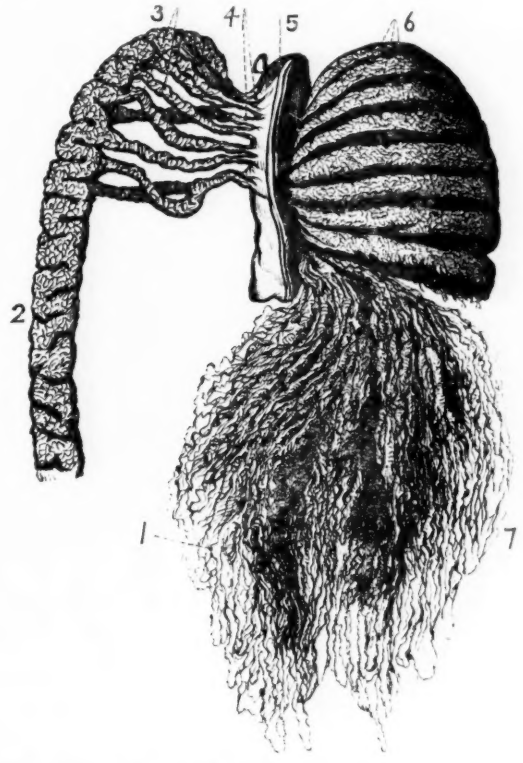

Fig. A.—Showing testicle partly macerated in KOH solution, which has loosened the connective tissue framework. (After Toldt.) 1. Tubuli seminiferi contorti. 2. Body of epididymis. 3. Coni vasculosi. 4. Vasa efferentia. 5. Tunica albuginea at hylum 6. Lobuli testis. 7. Tubuli seminiferi.

Each seminiferous tubule consists of: 1, a hyaline membrana propria; 2, several layers of epithelial cells—the seminal cells—which are usually arranged as follows: *a*, an outer (deeper) layer of polyhedral cells, the spermatogoma; *b*, an intermediate layer, the cells of which are in active proliferation, the spermatogenic cells; *c*, an inner layer, the spermatoblasts. The latter are granular, indistinctly outlined, and show no signs of proliferation.

At the apices of the lobules the tubes become straight,

join together to form larger tubes (vasa recta), and enter channels in the mediastinum (rete testis). At the upper end of the mediastinum the channels of the rete unite to form from 13 to 20 larger tubes (vasa efferentia), which perforate the tunica albuginea and enter the epididymis. At first straight, they become convoluted and form a series of cone-shaped masses (coni vasculosi), which together form the globus major. Opposite the bases of the cones the efferent vessels open at narrow intervals into a single duct, which constitutes, by its complex convolutions, the body and globus minor of the epididymis. This tube, the convolutions of which are held together by fine areolar tissue, is about 20 feet in length, and is continuous at the globus minor with the vas deferens.

The vasa recta and channels of the rete are lined by a single layer of flattened epithelial cells. The vasa efferentia and tube of the epididymis are lined by columnar ciliated epithelium, and their walls contain circularly arranged muscular fibers.

The vas deferens is a continuation of the tube of the epididymis. (See Fig. 1.) Commencing at the lower part of the globus minor, it ascends along the posterior border of the testis and inner side of the epididymis, and along the back part of the cord to the internal ring. From the ring it curves around the epigastric artery and descends into the pelvis at the side of the bladder to its base. In this situation it lies between the bladder and

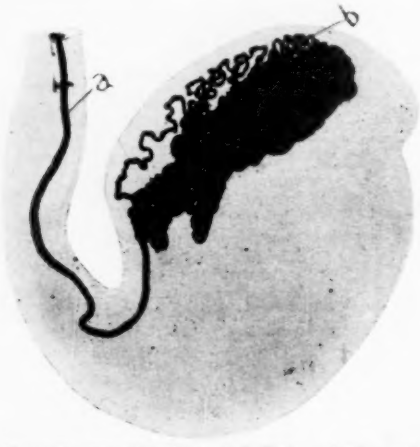

Fig. 1.—Skiagraph showing Vas and Tube of the epididymis injected with mercury. *a*. Vas. *b*. Tube of epididymis.

rectum and along the inner border of the seminal vesicle of the same side. Here it becomes enlarged to form the ampulla, then narrows and unites with the duct of the vesicula seminalis to form the ejaculatory duct. It is about 2 feet in length, the walls are thick and the lumen small, measuring 1/25 of an inch. The vas consists of three coats: 1, an external or cellular coat; 2, a muscular coat; and, 3, an internal or mucous coat, arranged in longitudinal folds and covered by columnar epithelium.

The blood-supply of the testis is principally from the spermatic artery, which arises from the abdominal aorta, and accompanies the other structures composing the cord through the canal. As it approaches the testicle it divides, some small branches continuing onward to supply the epididymis, while the larger ones perforate the tunica albuginea and enter the mediastinum to supply the glandular portion through the vessels of the tunica vasculosa. The vessel does not always divide so high as is pictured in the text-books. This is shown in Fig. 2, where the artery was injected with mercury and then skiagraphed. The bifurcation takes place close to the testicle, a fact to be borne in mind when operating.

The spermatic veins commence in the testis and epididymis, pass out at the posterior border and ascend in the cord as the pampiniform plexus. (See skiagraph Fig. No. 3.) Finally, two or three larger veins are formed from the plexus, pass into the abdomen with the artery and unite to form the spermatic vein. This, on the left side, empties into the renal vein, and on the right side into the ascending vena cava.

The lymphatics of the testicle (see Fig. 4) commence as minute vessels around the seminal tubules. These coalesce and most of them pass through the septa into the mediastinum. Others pass outward to join the plexus beneath the tunica albuginea, which plexus also communicates with a more superficial one beneath the tunica vaginalis. In the mediastinum the deep and superficial sets unite to form from four to six trunks, which pass upward in the cord into the abdomen. On the left side these vessels enter the glands near the aorta and left renal vein, while on the right they empty into the lumbar glands just above the bifurcation of the aorta. Afferent vessels from the glands of both sides empty into the receptaculum chyli.

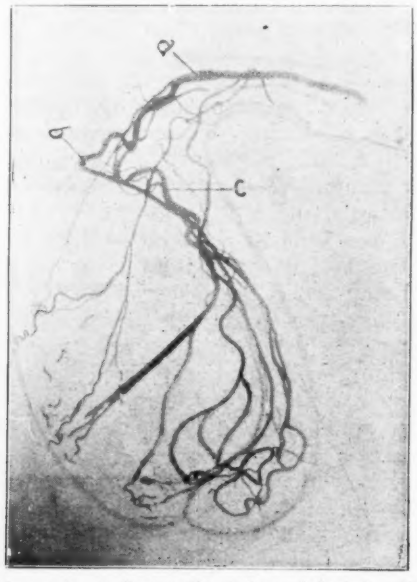

Fig. 2.—Skiagraph of Spermatic Artery injected with mercury. *a*. Spermatic Artery. *b*. Branch to epididymis. *c*. Branch to testicle proper.

The nerves are derived from the sympathetic system, branches from the aortic, renal and hypogastric plexuses, forming the spermatic plexus, which descends upon the spermatic artery and artery of the vas deferens. They are not provided with ganglia and have not been traced into the tubules. The terminal filaments ramify on the surface of the tubules and are distributed to the blood-vessels.

Physiology.—The functions of the testicle are two in number: 1, the production of spermatozoa; 2, the formation of an internal secretion, which is necessary to normal metabolism.

The spermatozoa are formed in the seminiferous tubules by a series of changes which take place in the spermatoblasts, or cells of the internal layer. These changes are as follows: The cell first assumes a pear-shape, the pointed end containing the nucleus, being directed toward the basement membrane. This portion forms the head of the spermatozoon. By a drawing out or elongation of the broad part of the cell the middle piece and tail are formed.

After puberty the semen is probably being constantly secreted, although most of the time in small quantities. As the spermatozoa are formed they are forced along the tubules by the pressure of accumulated secretion, aided by the ciliary movements of the cells lining the vasa recta, vasa efferentia and tube of the epididymis. In the two latter its expulsion is also aided by contraction of the muscular fibers in their walls. From the vas deferens the semen passes into the ejaculatory duct and seminal vesicle, in which latter, unless discharged immediately by emission, some of it is retained. It is probable, however, that the principal function of the vesiculæ seminales is secretory and that the ducts of the testes, rather than they, act as reservoirs for the semen.

The second and more important function of the testicles is the formation of an internal secretion. While the active principle of this secretion has never been isolated, nor the secretion itself been definitely proved to exist, experimental and pathologic evidence leaves

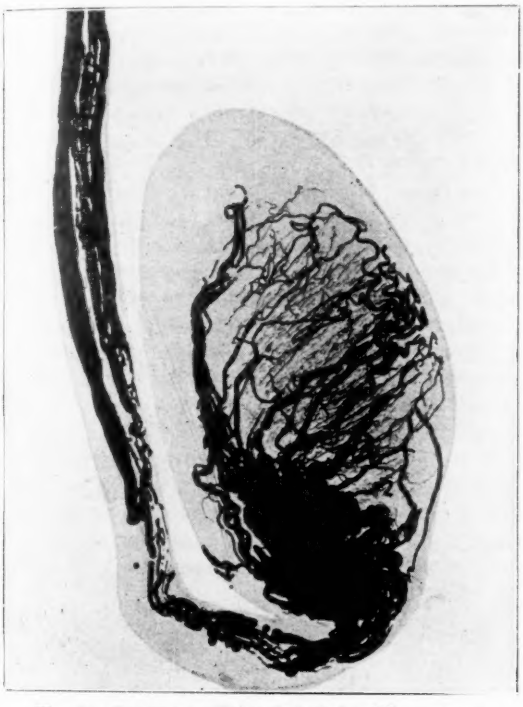

Fig. 3.—Spermatic Veins injected with mercury.

little doubt as to its presence under normal conditions. Its importance to the normal development of the body is shown in cases of cryptorchismus, or where both testicles have been destroyed or removed before the age of puberty. These cases invariably show a lack of the sexual characteristics which are normally developed at this time. Its influence is also shown, though to a lesser degree, in cases where both organs have been removed after puberty in early and middle adult life. In many of these, sexual desire is entirely lost, the prostate and other parts of the remaining genital apparatus atrophy, and in a few there is a loss of the sexual characteristics which were formerly possessed. The experiments of Zath, reported in 1896, are interesting in this connection. Under daily injections of testicular extract the working power of a man's neuro-muscular system was increased 5 per cent., and during rest his powers of recuperation were greatly increased.

It can thus be seen that the preservation of this normal secretion is worthy of careful consideration, and the purpose of this paper is to emphasize its importance. In addition to the physiologic effects on the general metabolism produced by the removal of the testes, in many cases grave mental states, such as melancholia, are induced. Finally, there is the practical side, that many patients will not consent to the removal of both testes for tubercular disease until the bladder and prostate have become involved, or until they realize that death will result if the diseased organs are retained, while they will readily consent to the removal of both epididymi, upon the physician's statement that the testicles proper will be preserved.

Etiology. Age.—Tuberculosis of the testicle may occur at any age, but it is much more common during early adult life, between the ages of 20 and 35 years,

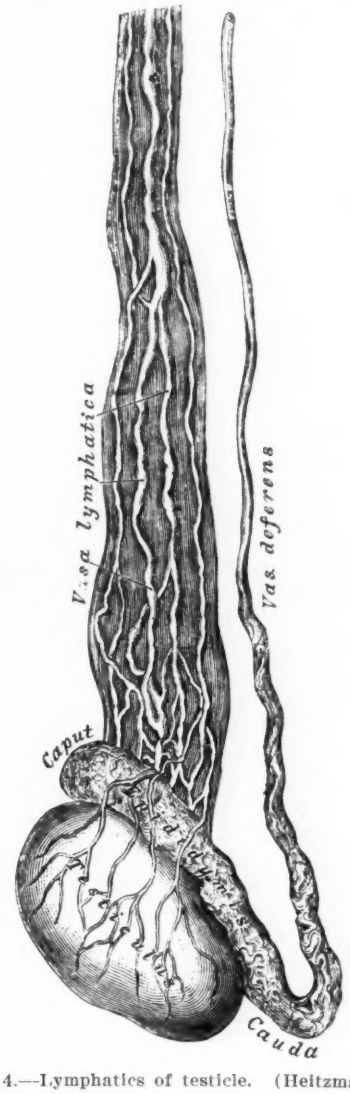

Fig. 4.—Lymphatics of testicle. (Heitzmann.)

when the activity of the sexual gland is at its height. In Koenig's cases the different decades were affected as follows: Under 4 years, 3; between 20 and 30 years, 24; between 30 and 40 years, 8; between 40 and 50 years, 4; between 50 and 60 years, 4; between 60 and 80 years, 2. Of the latter, one was 67, and one 72 years of age.

The age statistics quoted by Senn from the various authorities are as follows: Sallerton in 47 cases observed the period of greatest liability to be between 20 and 30 years. Kocher from 50 cases also between 20 and 30 years, while Simonds, from an analysis of 69 cases, found the greatest number between the ages

of 40 and 50 years, with 20 to 30, and 30 to 40 years coming next in frequency.

Jullien reported 16 cases of tubercular testicle in infants, 6 of which were under 1 year of age, and Dr. Dreschfeld a case where the disease was present at birth. In one of Koenig's cases the disease was noted a few days after birth.

As regards the other extreme of life, Gibson has reported a case in a man aged 81 years. In the cases here reported the average age was about 33 years.

Hereditary Influence.—This may be shown in two ways: 1, where the disease is present at birth or develops very soon after; 2, as an inherited condition of lowered vitality, in which there is a tendency to the development of tuberculosis, due, probably, to a lessened resistance of the tissues.

In perhaps the majority of the cases no tubercular family history can be obtained, this absence of hereditary influence being especially marked in cases which develop in adult life. In 10 cases of testicular tuberculosis in children, reported by Jullien and Lannelongue, 4 presented a distinct family history. In 5 of Koenig's cases, in which the disease was distinctly localized in the testis, and in which he believed it to have originated from pre-existing tubercular deposit, there was a family history in 3.

In 16 cases reported by Jullien, 6 were in patients less than one year of age. An inherited tendency is probably present where the disease develops so soon after birth.

Injury.—In many cases there is a history of traumatism preceding the onset of the disease. The injury in most cases, slight and insignificant, may be forgotten by the patient, who does not connect it with the onset of his trouble. In other cases the relation between the two is so striking and direct that it can not be overlooked. This etiologic factor is beautifully illustrated in Case 10, where the disease developed almost immediately after a kick in the testicle. The rule is that the tubercular process does not manifest itself conspicuously until at least six weeks or more have elapsed from the time the injury was received.

Previous Inflammatory Processes.—Of all affections of the genito-urinary tract, which predispose the testicle and epididymis to a subsequent tubercular infection, gonorrhea is the most important, either a gonorrheal epididymitis or a posterior urethritis. In 52 cases collected by Kocher, 14 had suffered from it previously. The tubercular process may follow the gonorrheal immediately, while the latter is yet in the acute stage, or at any time after the subsidence of the active symptoms. It must not be forgotten, however, in this connection, that the gonorrheal inflammation may be simply the means of lighting up a latent tubercular focus, which had been lying dormant in the epididymis for years, without, perhaps, the patient being aware of its existence.

The explanation of this phenomenon is simply that of a *locus minoris resistentiæ* left after subsidence of the acute inflammatory process. This area of diminished resistance may perhaps in some cases be a defect in the mucous lining, through which germs may enter from the surface. Tuberculosis of the testicle does not commonly follow the acute infectious diseases, even when these have been complicated by an orchitis. J. B. Shaw reports a case where it was supposed to have followed an attack of measles.

Atrium of Infection.—This at the present time is undergoing most rigid scientific investigations. The channels through which infection may take place are, in order of frequency, as follows: 1, respiratory tract; 2, gastrointestinal tract; 3, genitourinary tract; 4, skin.

That the respiratory tract, with arrest of infecting organisms in the mediastinal glands, is the most frequent atrium of infection, is shown by the researches of Jens Bugge. This investigator has shown that 75 per cent. of all human beings who come to the post-mortem table have had mediastinal glandular tuberculosis. As is well known, this disease may exist without producing any symptoms, and it will therefore be seen how readily a crypto-tubercular infection in this locality could precede a localized infection of the testicle. It is our belief that the mediastinal glands are the most common sources of supply for tubercle bacilli in the body.

Carious teeth with ulceration of the gums about them, and defects in the mucous membrane of the nose, mouth, tonsils and middle ear, with subsequent infection of the cervical lymph-glands may, especially in children, be the primary sources of infection.

That the gastrointestinal tract admits of infection from tuberculous material taken in as food, can not be questioned, but that it is attacked much less commonly than is generally supposed is proved by the infrequency of tuberculosis of the mesenteric glands. (Northrup and Boviard.) Dr. W. J. Mayo, of Minnesota, has found that in the rural districts, where milk is largely used as an article of diet, a localized tuberculosis of the intestinal mucosa is not very uncommon, but that the mesenteric glands are very rarely involved without a demonstrable lesion in the intestine. In this respect the intestinal tract differs from the respiratory, where in many cases no physical changes can be demonstrated at the point where the bacilli have gained entrance.

That infection can take place directly through the urinary outlet, the urethra, or through the genital outlet, the vagina, is generally admitted, and cases have been reported where it was transmitted from a tubercular uterus or vagina to the glans penis, or prepuce. (Jonin, Cornet.) Reclus denies that infection ever takes place in this way.

That tubercular infection is often admitted into the system through the skin is shown by the number of cases of the local disease among physicians, and in the children of tuberculous parents, these children so often developing lesions about the cheeks, lips and mouth.

The tubercle bacilli having gained entrance into the system, the next subject for consideration is: How do they find localization in the testis? There are a number of routes by which the infection may be carried to the sexual glands: 1, by the blood-stream; 2, along the surface of the mucous membrane of the genito-urinary tract; 3, by the lymphatics.

1. Transmission by the blood-stream has been, by most authors, considered to be the most important. The bacilli contained in the blood localize in the epididymis at some point where there exists a focus of diminished resistance, either congenital, or produced by previous injury or disease. The frequent localization in the epididymis is accounted for by the fact that the spermatic artery divides opposite that organ, and that the vessels of the epididymis are smaller and more tortuous than those of the vas or testicle proper, the current therefore being slower. (Saltzman.)

2. In some cases the infection undoubtedly travels along the surface of the mucous membrane. This view

is supported by Koenig in his recent paper on the subject. He believes that in a very great majority of cases the testicular affection is preceded by tubercular disease higher up in the genito-urinary tract, especially in the vesiculæ seminales and prostate. In the 45 cases reported by him, these organs were involved 31 times. In the majority of cases, however, there were distant foci in the lungs, bones, glands, etc. Kocher holds the same view. Cayla thinks that a descending infection along the mucous membrane is most common, and believes that the infection travels in the same direction as the current of urine, and against that of the semen. His views are based on 100 sections, in which he observed that tubercular disease of the genito-urinary organs was always preceded by tuberculosis higher up.

Guyon and Lancereaux have observed that the process often begins in the vesiculæ seminales. Virchow has always held that the infection was a descending one, beginning in some of the higher genito-urinary organs. Saleron is opposed to this view, as in 51 cases examined by him, organs, other than the testicles and epididymis, were involved in only one case. Senn states that frequently the infection descends from the prostate, seminal vesicles or kidneys. Weigert (cited by Kocher) thinks that the prostate favors localization of all kinds of micro-organisms, and Keziwicki, in 15 autopsies on cases of genito-urinary tuberculosis, found the prostate involved 11 times.

M. Verneuil believes that infection often takes place during coitus, and gives anatomical reasons for his views. This seems very doubtful, however, when we consider the frequency of tubercular epididymitis in children. Furthermore, if this were the case, we should more frequently meet with tubercular lesions of the penis and urethra, for there must be ample means for inoculation in the abrasions of the urethral mucosa so commonly found in gonorrhea.

While we can undoubtedly have a descending infection, it is our observation and that of many other investigators, that the disease is usually an ascending one, the epididymis being affected primarily and the bladder, prostate, etc., secondarily, the process extending upward along the surface of the mucous membrane of the excretory duct.

3. Transmission of the infectious material to the testicle by the lymph channels, while usually given as one of the routes, must be very rare, as the lymph-current is directed away from the organ rather than toward it. No cases have been reported which show the infection to have taken place in this way.

Koenig thinks that in some cases the disease begins as a primary tuberculosis of the testicle, the infection having been carried to the organ some time before and remaining dormant until lighted up by the occurrence of one of the exciting causes, such as injury, acute inflammatory processes, etc. This view is based on the studies of Jani, who found bacilli in apparently healthy testicles of patients suffering from pulmonary phthisis. Koenig thinks that this may explain some cases where no atrium of infection can be demonstrated.

(To be continued.)

Senile Alterations in Ganglion Cells.—The *Berliner Klin. Woch.* quotes Marinesco to the effect that the atrophy of the ganglion cells from advancing age is manifested first by chromatolysis, then pigment-formation and shrinking of the processes. He has suggested that this senile atrophy of the nerve cells might be prevented by introducing into the organism the serum of young animals as dynamogenic substances.

TUBERCULAR TUMOR OF THE ORBIT.*

HOWARD F. HANSELL, M.D.

PHILADELPHIA.

In the spring of 1899, a small tumor appeared between the upper lid and the superior margin of the right orbit in a girl of 13. It received no medical attention until the autumn, when she applied to the out-patient department of the Jefferson Medical College. She stated that recently the tumor had increased in size and that the lid was swollen and drooping. The growth was painless and insensitive except on hard pressure; it was hard and inelastic, and projected about two millimeters beyond the vertical plane of the anterior margin of the orbit. The tumor was partly movable and was attached to the roof of the orbit a few millimeters back of the bony margin. Its anterior edge was rounded, quite smooth and thin, as though it belonged to a flat tumor about the size of a silver dollar. The lid was edematous and its elevator paretic. The eyeball was not discolored nor were its movements abnormally restricted. Refraction was low myopia. The media were clear and the fundus was healthy. The left eye was normal in all respects except the refraction, which was slightly myopic.

The parents of the girl are living and healthy, and there is no family history, however remote, that shows a trace of tuberculosis. The patient is anemic, but makes no complaint of disordered health. The lungs are sound and the abdominal organs free from disease. She had not menstruated.

The diagnosis of the nature of the growth could not be determined. After several weeks of observation and treatment the tumor was enucleated without disturbing the eye or its muscles.

The report of the microscopic examination, made in the laboratories of the college by Dr. H. F. Harris, is as follows:

The specimen as received consisted of two masses of tissue. The larger was irregular in form. On section, this piece of tissue was found to be quite firm and to present a uniform pinkish-gray color. It has an average length of 3 cm., an average width of 1.5 cm., and a thickness of about 5 cm. Weight was 4 gms. The smaller piece of tissue was irregular in form, being about 12 mm. long, 5 mm. thick and 6 mm. wide. This piece of tissue did not weigh more than 1 gm.

Specimens were fixed in Heidenhain's solution, embedded in paraffin, sections stained with hematoxylin and eosin, carmalum and picric acid, toluidin blue alone and with eosin, and by the method of Weigert for bacteria.

On microscopic examination the specimen is found to be made up of a basis of collagenous tissue intermingled with a considerable quantity of adipose tissue and involuntary muscle fibers. Around the edges of the specimen the tissue is for the most part practically normal, although in some situations the changes presently to be described extend to the very margin. In the upper portions of the specimen there are two well-defined and undoubtedly separate processes to be observed. Especially in the regions occupied by fatty tissue there is every evidence of the action on the tissues of some agent which produces suppurative change. The tissues here are infiltrated with, and in a measure replaced by, masses of polymorphonuclear leucocytes which show the usual tinctorial properties of these cells. Intermingled with these cells are some red cells, some mononuclear leucocytes and quite a number of plasma and mast cells. Here and there may be observed a swollen connective-tissue cell in addition, though they are comparatively rarely seen. The blood-vessels in this situation do not show change of any kind. The fibrils of collagenous tissue which pre-exist in the part are practically unaltered.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

In other parts of the specimen, and at many points merging into the altered tissues, as just described, there are changes which are characteristic of bacteria and other disease-producing causes which do not cause the leucocytes to be attracted to the part, but which, notwithstanding, produce a low degree of inflammatory change. These alterations are most numerous in the perivascular lymph spaces, where there are enormous collections of lymphoid cells. These lymphoid cells do not remain confined to the lymph spaces, but may be seen to permeate the surrounding tissues. In these regions the cells show an increased protoplasm which is faintly basophilic—the daughter plasma cells of Unna—and still farther outward perfectly characteristic plasma cells are seen in considerable numbers. Mixed with them are a considerable number of mast cells. The connective-tissue cells in the vicinity are often swollen and many present the peculiarities of fibroblasts. The walls of the blood-vessels, which lie generally eccentrically placed in these masses, appear but little altered. Some of the fibrils occurring in these walls seems to have undergone a slight degree of hyaline change, and the number of nuclei in the muscle walls appear to be increased in many cases, but these changes are by no means constant and are of a not pronounced kind. The endothelial lining of these vessels appears normal. The connective tissues which lie in the vicinity of these blood-vessels do not show appreciable alteration, though it is quite possible that the amount of this tissue is increased. This appears to be unmistakably the case in the adventitial coating of some of the smaller vessels around which there is no collection of lymphoid cells. In these cases the amount of collagenous tissue is, in the situations mentioned, undoubtedly increased. The inner coats of these vessels show no alteration. In the central portion of this specimen there is a comparatively large area in which the tissues have undergone complete necrotic change. What still remains of the original tissue in the part takes intensely the acid stain, while there are a few fragments of nuclei included in the mass which still retain the power of reacting to basic dyes. At one side of the necrotic area there are found three large and very typical giant cells, the nuclei of which, as is usual, lie toward the periphery of these bodies. Forming a well-defined border to this area are tissues undergoing necrobiotic change. In this area the nuclei of the cells, which are for the most part in a fragmented state, still stain intensely with basic dyes, and the protoplasm and intercellular substance with the acid dyes with a little more than the usual intensity. A little farther outward there is a wall composed almost entirely of fibroblasts intermingled with which are a few lymphoid cells. In this region and in the area of necrobiotic change just referred to, there is an amorphous, intensely basophilic, intercellular substance in many situations, which appears to be mucin. Still farther outward the fibroblasts are gradually replaced by the normal fibrous tissue of the part, but even here there are found lymphoid cells, plasma cells, mast cells, and an occasional bit of mucin. On one side of this area the involuntary muscle fibers, which were at first referred to, are seen to be considerably altered. The fibers are ill-defined and the nuclei are enormously increased in number, and are exceedingly irregular in form. Mucin is also found in these situations.

Specimens stained for bacteria were very disappointing, inasmuch as no bacteria could be found in any part of them. Many sections were stained and organisms were carefully searched for, but as none were found it seems obvious that though tubercle bacilli must be present they are in such small numbers that they were overlooked. As regards the cause of the suppurative change nothing can for a like reason be definitely said, though it seems in the highest degree probable that some of the pyogenic organisms must have been, at least at one time, present in the mass.

Diagnosis: The tumor is beyond doubt primarily of tuberculous origin, added to which there has been some cause inducing a mild degree of leucocytic infiltration. The mass may be said to be at present both tuberculous, and, parts of it, in a condition akin to abscess formation.

A short time after the operation the case passed under the care of my colleague, Dr. de Schweinitz, who has repeatedly examined her during the past three months and to whom I am indebted for the opportunity to make a final examination, April 19. The ptosis that had been made complete by the operation was slowly recovering. The skin at and near the scar of the incision was slightly pigmented, but the tissues were healthy. A small hard mass could be readily felt at the previous site of the tumor, but it had fewer of the characteristics of a recurrence than of solid exudation from the incised and wounded periosteum. My colleague believes this new tumor has decreased in size under arsenic.

I have been unable to find the record of a single case in ophthalmic literature of tubercular tumor of the orbit. The nearest approach was the description of a case of tuberculosis of the orbit by Sureau[1]. A 13-year-old boy had a persistent fistula and discharge from the upper part of the right orbit since the opening of an abscess seven months before. The pus that had collected in the fistula contained numerous bacilli of Koch. The incision was enlarged and the roof of the orbit and the adjoining soft parts were curetted. Cure was complete in three months. There was no sign of disease of the sinuses, although Panas believes that caries of the orbit always has its origin in sinus disease.

DISCUSSION.

DR. G. E. DE SCHWEINITZ, Philadelphia—I had the pleasure of examining this growth before it was operated on by Dr. Hansell, and, as he says, I have subsequently seen the patient very often. Certainly, it is a most unusual neoplasm, which I was inclined to regard as a lymphoma before the report of the pathologist was made. The question of recurrence is a little difficult to decide. There is present at the seat of operation a swelling, which has decreased somewhat in size, but there is still a hard flat nodule in the upper and outer part of the orbit, and with the concurrence of Dr. Hansell I shall remove it very soon.

DR. HANSELL—It was surprising to me to find that there were no similar cases reported in literature. I found some cases of tubercular abscess, and plenty of tuberculous disease of the eyeball and lachrymal gland, but nothing like this tumor.

OSSIFICATION OF THE CHOROID LEADS TO THE IDENTIFICATION OF THE BODY IN AN INSURANCE CASE.*

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Early in October, five years ago, a well-known wholesale clothier of Baltimore telegraphed to his wife from a point in Canada to meet him on a Saturday, at 4 p.m., in the Grand Central Station, New York. She was there on time, but failed to find her husband. She ascertained from the sleeping-car conductor and porter that her husband had occupied a berth on the train, and some of his clothes were found in the berth. The porter said that he had seen Mr. A. passing through the car door, presumably on his way to the car ahead, and that the train at this time was crossing the Niagara River. The following week the wife appeared at the office of the insurance companies and claimed the insurance, which the companies refused until more conclusive evidence was forthcoming of the man's death. Weeks passed and still the family were unable to bring forward absolute proof of Mr. A.'s death. A minute description of him was put in all the papers in that section of the country, rewards were offered and notices posted throughout a stretch of country along the Niagara River.

Nine months after Mr. A.'s disappearance, his wife

1. Annales d'Ophthalmologie, cxvi, p. 367.

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received notice that the body had been discovered and that all this time it had been in the river. The body was brought to Baltimore, and as it was in an advanced state of decomposition it was promptly buried. It might be well to state here that when found the body had on a pair of drawers, an undershirt and a collar which was marked with his initials. The companies then came forward and claimed the right to inspect the body, at the same time asserting that the latter in all likelihood was unrecognizable from having been nine months under water. I need not go into the details of the autopsy, which was made by a prominent pathologist in Baltimore. It can easily be imagined, however, that a body which had been exposed to such conditions would have lost many of the physical characteristics peculiar to it before death. It may be sufficient for me to say, however, that much of the flesh on the face and head was gone, and this brings me to the eyes, which were submitted to me for an examination. It was remembered by his family that he had lost his left eye as a child from a blow with a stick. This eye then had been blind for many years, and I elicited the fact that it had a whitish appearance in the pupil, which no doubt was a shrunken lens capsule, probably the result of a traumatic cataract.

The question then was, if it were possible to find in the left eye anything which would indicate that the man had been blind in that eye for most of his life. The following was the result of my examination:

MACROSCOPIC EXAMINATION.

Right Eye: Cornea perfectly and uniformly opaque. This opacity was remarkable for its density and it evidently involved the entire substance proper of the cornea as well as the epithelial layers.

The cornea was sunken in the middle, and this was explained by the loss of the intra-ocular fluids, a fact revealed when the eye-ball was opened. The eye-ball was soft and mushy and its sides could be pressed together at any two opposite points, just like a collapsed balloon or bag. On opening the eye-ball there was no evidence of vitreous body or crystalline lens. The retina and choroid were not separable, but they formed a dark, indistinguishable mass that went to pieces when picked up with the forceps. These two coats seemed to be absolutely disorganized. The iris seemed devoid of pigment and was recognized as a delicate, colorless membrane, resting against the posterior surface of the cornea. This membrane, too, like the choroid and retina, was decomposed. The optic nerve was shrunken.

Left Eye: The cornea was hazy and faintly transparent over an area comprising about two-thirds of the entire surface. This transparency allowed one to see beyond, and on pressing the eye-ball at its posterior pole a grayish mass could be seen to advance toward the cornea. This mass occupied the position of the crystalline lens. The entire periphery of the cornea was opaque. This opacity was not sharply cut as to its inner borders, as is the case with the arcus senilis, but had a ragged inner edge with here and there a more marked jutting out into the clearer cornea.

This eye-ball, too, was collapsed like its fellow. On cutting open the eye-ball, both retina and choroid were found in a condition similar to that of the right eye. The iris, too, lay against the posterior surface of the cornea and appeared devoid of pigment. When picked up, this part of the eye fell to pieces. The grayish mass mentioned as being visible through the cornea proved to be a small body about the size of a grain of rice and of irregular shape and nearly solid. In the posterior part of the eye a hard substance was felt. This substance was apparently loose and lying in disorganized choroid and retina. It was picked up with the forceps and seen to be a thin sheet of what was evidently ossification of the choroid. It was 7/16 of an inch long and about 3/16 of an inch wide, and posteriorly it was perforated by a round hole. The optic nerve was shrunken. Nothing further was noteworthy in this eye.

The striking points about this part of the examination were, 1, the dense and uniform opacity of the right cornea, and, 2, the existence of the plate of bone in the posterior part of the left eye-ball.

MICROSCOPIC EXAMINATION.

Cornea of Right Eye: Impossible to get any reliable differential stain. The tissue could be recognized as that of the cornea, but beyond this nothing could be said of its ante-mortem condition.

Left Cornea: The same want of definiteness existed as was seen in the cornea of the right eye.

Grayish mass in left eye-ball, composed of a cloudy, round large center, made up largely of bands looking like the layers of the lens. This mass was surrounded by clumps of pigment. All that could be said of this mass was that it resembled lens substance more than it did anything else. The retina, choroid and iris stained so diffusely that nothing valuable could be made out. This was the case in both eyes. It was impossible to demonstrate the existence of cataract.

The substance removed from the left eye-ball, and pronounced by me to be the condition known as ossification of the choroid, was shown under the microscope to be bone, as I had said.

It will be seen from this that while the small body, of irregular shape and about the size of a grain of rice, might reasonably be regarded as a shrunken lens the result of a traumatic inflammation, it could not of itself be regarded as positive evidence that the man had been blind for many years, for such a condition of the lens can be brought about in probably one or two years. With the discovery, however, of the plate of bone there was immediately obtained unmistakable evidence that the man had been blind in that eye for many years before his death. In those cases of ossification of the choroid which I have seen, the patient had been blind from early childhood. This conclusive proof then that the left eye had been blind for a long time, was evidence enough in the opinion of the insurance companies to establish the identity of the body, and the money was paid.

It is clear from all this that the microscopic examination of an eye which has been exposed to such conditions reveals nothing of any value, owing to the post-mortem changes in the cell structure. Indeed, the disintegration of the various parts of the eye is so far advanced that it is impossible to draw any conclusions as to the ante-mortem condition, even as to the color of the iris. The effect of the water on the eye for so long a period was to completely obliterate ante-mortem characteristics, with one exception, ossification of the choroid. There was present in this case then, the only ocular condition which would have been valuable in establishing the identity of the body.

MEASLES AND THE EXANTHEMATA.

SHALL CHILDREN BE KEPT THEREFROM? LIKEWISE FROM DIPHTHERIA AND PERTUSSIS.*

C. F. WAHRER, M.S., M.D.

FORT MADISON, IOWA.

It might be stated as an axiom, that as long as a child does not have a disease, it can not die from it; and the first step to prevent such a death, is to prevent a child from acquiring the disease. Hence, we have now in nearly all the states quarantine laws that prevent largely the spread of all contagious diseases, and this

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is certainly, in the vast number of cases the proper thing to do, namely, prevention is much better than cure, at least for the patient, if not for the physician. There is one element in many of these diseases we can not control, namely, the epidemic element; but in a municipality placed under strict health laws, put into ideal sanitary conditions, even the epidemic element will thus be largely modified. Could these ideal sanitary regulations be everywhere enforced, and always exist, then it were worth while to quarantine against everything to which the least suspicion of contagion is attached, even such mooted diseases as consumption, cancer, typhoid fever, cerebrospinal meningitis, and many more whose status is not yet fully defined. But I have thought a great deal about the matter; if it is with as good a show of reason that we keep our children from measles as we do from rötheln, varicella, variola, scarlatina, diphtheria and pertussis, and to this purpose this paper is dedicated.

I have no desire to say anything for the purpose of evoking useless criticism or captiousness, or to be in anywise pyrotechnic or make a display of being queer or finnicky, but to honestly make an inquiry whether we are acting wisely or not.

I shall hold that it is not always best to keep our children from acquiring measles, at least not with as good a reason as we have for preventing their acquiring such virulent diseases as scarlatina, variola or diphtheria, for the following reasons:

Rötheln and varicella may at once be dismissed, as it matters little whether a child has them or not, as neither is ever fatal, only chicken-pox may leave a few disfiguring scars, or even blindness in some remote cases by a scar remaining on the cornea in the pupilary axis of vision.

Now, we have weighty reasons as to scarlatina. First, because it is always a dreadful disease that not only kills thousands of our children, but no one can ever tell what fatal or troublesome sequelæ or complications it may have with it. Many children who do not die outright, may afterward have diabetes, Bright's disease, or paralysis of one or more limbs, from which they may die after lingering illness, or remain hopelessly diseased all their lives.

Also, another reason for quarantine against scarlatina is that this affection is not likely to be acquired after one has reached adult life, and even if acquired, runs usually a much milder and less complicated course.

While diphtheria is not an exanthem, I should like to include it in my list of diseases, and will just mention that what I have said of scarlatina is largely true of it, with the exception that since we are using diphtheria antitoxin, it is not so fatal a malady as before.

In variola we have at all times of life a dangerous, loathsome malady, which has a large mortality, with intense suffering to the afflicted one, and even those who recover are forever horribly disfigured on account of the ugly pockmarks it leaves. So terrible is this pestilence that we are not only content to quarantine against it, but in this case we fight fire with fire; we substitute another disease for it, namely, vaccinia, by vaccinating ourselves with the virus of cowpox, and though this is by no means a pleasant disease to have, yet we prefer it to its horrid analogue, one of the scourges of mankind. And here we have a hint in fighting the measles of adult life, always a dangerous affection, by substituting the measles of childhood,which is less dangerous.

While pertussis is not an exanthem, I desire to mention it because it comes under my line of reasoning also, for we know this often proves not only a long and tedious malady of childhood, lasting, according to the season of the year, from three to seven weeks, and often longer, but is in early life very fatal, and frequently accompanied by complications, such as pneumonia, bronchitis, pleurisy, emphysema and others, and often when recovered from leaves the child weak and of frail constitution, making it an easy prey for other diseases. Again, as in some of the others mentioned, adult life, while not entirely exempt from it, does not become so easily affected, nor is the mortality nearly so great nor do adults easily acquire it, if exposed thereto.

Now, premising that these foregoing statements are true or as nearly so as we can gather from our varied experiences, and a summary of the knowledge we can obtain from our most reliable sources, let us see whether the same reasoning holds good as to measles, or whether we can show good reasons for a different or modified course.

That measles is always to be regarded seriously on account of the possibilities with which it is surrounded or associated, no one can successfully deny. The mortality from this affection in the aggregate is great, but mostly during adult life, and that it is often associated with ugly complications we all must admit, also the same is true of some of its sequelæ; are they not principally true during adult life? I do not mean to obtain your assent by begging the question, but by suggesting your assent or denial according to your varied experiences. Many epidemics of measles are so mild, especially during the warmer seasons, that the majority of those sick, if children especially, never go to bed, but remain outdoors and play, and scarcely show any signs of distress. When a mild epidemic shows its character, why not expose all children above 2 years and under 12 to 14 years to it? Measles, ever so mild, is prophylactic against any future exposure, as much or more than vaccinia is against smallpox. Whatever phase measles exhibits during childhood, we will all admit that generally it is very severe among adults, causing a great mortality *per se*, and still greater on account of its complications.

It is true the hygiene of prisons and camps, as well as other places of detention such as the various hospitals, is to-day more perfect, yet much is to be desired, and we know that if measles breaks out in such places, especially among adults, the mortality is usually great and the epidemic hard to manage. But my observations on a large number of epidemics, it is true, in Iowa, where we have small cities and many small country towns and rural districts, have invariably shown very light mortality among children under 14 and a much greater number of deaths among the adults. It is undeniably true also that the very young, say under 2 years of age, also bear the disease very poorly.

In the discussion before us, of course, much must be considered. I think the disease should always be quarantined against in children's hospitals, in private schools, in severe winters, and in the unsanitary districts of crowded tenement wards or other unhealthy communities, since in these cases complications are easily evoked, especially tuberculosis following the disease as a sequela. But when we can expose children in ordinary health to a mild epidemic of measles, there would probably be the same gain as we experience in the substitution disease of cowpox for smallpox.

Even in an epidemic recently observed in a small rural community, where there were 68 cases of measles, no one under 15 years of age died, but 3 adults died out of 23 cases over 25 years of age. This epidemic is a fair sample out of many I have observed in rural districts, villages and small towns from 2000 to 30,000 inhabitants.

In case the susceptibility to acquire measles diminished much, as adult age is reached, it would be more worth our while to quarantine, but such is not the case; adults are just as likely to acquire measles as children, when exposed to the contagion or an epidemic, and when acquired become usually more dangerous. I am aware that while I had my experiences with thousands, there are those here who have had theirs with tens of thousands, yet I hope that no javelins will be thrown on account of the difference, rather if my suggestions appear weak before the strong let them deal kindly with the erring, and thus show us the better way. There is, however, a margin always in favor of quarantine, and that margin is the doubt in diagnosis. Until that is fully established, while we fear a case of measles or varicella may be scarlatina or variola, a mistake that not only happens to the neophyte but to the oldest veteran in practice at times, it is best not to allow patients to come in contact with others.

I now submit these few premises for your conclusions, and trust you will accept them in the spirit offered, namely, let our contentions be in quest of truth, and the greatest good for all. Undoubterly your varied experiences may cause you to differ as the parallax depends on the different stations occupied by different observers viewing the same object. One may see the same shield black that another sees white and if it were turned, opinions as to color would change. As for me I am glad I had the measles when I was a child, and so are all of you who are in the same boat.

ROETHELN.

ITS DIFFERENTIATION FROM MEASLES OR SCARLET FEVER.*

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NEW YORK CITY.

It is very difficult, even from a historical standpoint, to accept a description of an epidemic, exanthematous affection of a century ago and try to adapt this description of disease to what we see to-day. Our point of view is entirely at variance with that of observers of an early clinical school. With such a disease as roetheln or rubella our confusion is more marked if we study the epidemics of this disease described by Hildebrand in 1832, Heim in 1812, and Forney in 1784-1796. It is not surprising that such a writer as Jurgensen is thrown into doubt. It would be well if we should reject all but the most modern descriptions of epidemics of roetheln, as these modern writers can be more easily understood by us to-day. We do no injustice then to older, or we may say to antiquarian, historians; their descriptions are obscured by lack of accurate clinical methods. Even in such simple matters as the description of an eruption, its location and characteristics, with roetheln, the lack of explicit and modern description, in older writers can only be appreciated by any one who will study the history of this disease. As far back as the 18th century we find descriptions of a disease which often accompanied or occurred, as it were, on the outskirts of epidemics of measles and scarlet fever. Though resembling cases of both diseases, they could not be classed as belonging to either of the well-known exanthemata. The early descriptions of this disease are marred by bitter polemics, some physicians contending that they were in the presence of a distinct disease, roetheln; others that the disease in question was but a mild measles or scarlet fever. To-day we find such observers as Henoch and Jurgensen still in doubt as to the entity of roetheln.

These are the considerations which have induced the writer to present his views on this subject. He agrees with Trousseau, Cheadle, Thomas, Baginsky and Eminghaus, that roetheln is a distinct and definite disease, independent of measles or scarlet fever. It has a distinct semeiology, and can to-day be differentiated especially from measles or scarlet fever. Trousseau describes under the heading of roseola, rubeola exantheme fugace, a disease which he places in the same relation to measles or rubeola that varicella holds to variola. He describes the exanthem, lays stress on its evanescent character, its characteristic location, the absence of affections of the mucous surfaces—conjunctiva, nasal passages, and lungs—and the absence of any sequelæ or complications. He calls attention to the fact that an attack does not prevent subsequent attacks, nor protect against measles. It occurs epidemically and is contagious. Thomas[1] gives the most modern, and to me a very classical, description of some epidemics of roetheln which he has observed. His descriptions, to which I will freely refer, have done much to place the disease on a firm, independent basis. He describes two forms of exanthem, the small and the large papular. He describes minutely the appearances, if any, on the mucous membranes, the temperature and course of the disease. Eminghaus[2] also describes an epidemic of roetheln and concludes that it is a disease sui generis. His descriptions are not as definite nor as simple and classical as those of Thomas. In the transactions of the International Congress at London, 1881, a full discussion of the position of roetheln to the other exanthemata took place. The disease was discussed by various leading authorities of the times, most of whom are living to-day — Cheadle, Shuttleworth, William Squire, Kassowitz, Baginsky, Jacobi, and Lewis Smith. Smith's description of a New York epidemic is particularly full and definite. The consensus of opinion was that roetheln, rubeola sine catarrho, rubella, was a disease, giving no protection from measles or scarlet fever and distinct from them. Returning to the textbooks, Barthez and Rilliez, 1861, acknowledged the great difficulty in distinguishing between roseola and rugeola—measles. They place more reliance on the absence of marked general symptoms than on characteristics of eruption for a diagnosis. Kaposi (1887) is inclined, with Hebra, to look on roetheln as a mild or anomalous form of measles, and denies its right to the dignity of a distinct disease sui generis. He cites Kassowitz, who at first disapproved the view that roetheln was a distinct disease, but subsequently observed an epidemic which caused him to rather support the view of its being a disease distinct from measles or scarlet fever. Gerhardt, in 1881, believes that roetheln is distinct from measles or scarlet fever, though he admits that roetheln occurs epidemically with measles. Gerhardt mentions the school of Shoenlein, which regards

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1. Jahrb. f. Kinderheilk., 1869.
2. Jahrb. f. Kinderheilk., 1871.

roetheln as a mixed or bastard form of measles or scarlet fever; on the other hand, he is inclined to side with Thierfelder, Koestlein and Thomas, who regard the disease as distinct from measles and scarlatina, which it resembles in several characteristics. E. Husset,[3] regards roetheln as distinct from measles and scarlet fever. In closing this historical review we need but mention the work of Griffith, of Philadelphia, who describes a severe form which occurred epidemically and which seems to have been observed by few other authors. Forcheimer, in the "Transactions of the American Pediatric Society," has recently described an epidemic in Cincinnati in which he made a minute study of the appearances on the mucous membrane of the soft palate, to which we shall return again.

Looking over the work of those who have studied roetheln in large or small epidemics, we are struck by the incompleteness of most of these studies. The number of cases observed by each author is not only small, but limited for the most part to one epidemic. The experience of many writers numbers at most only 50 or 100 cases. A great number of observers do not seem to have approached their cases with sufficient experience in the diagnosis of skin eruptions which might resemble that seen in roetheln. In one case we find an author a violent opponent of the view of roetheln being an affection independent from measles or scarlet fever; a few years later this same author has had an opportunity to observe an epidemic and he straightway becomes convinced of the specific nature of the affection.

During the past seven or eight years the author of this paper has made a special study of the relationship of roetheln to measles and the other exanthemata. During these years, and especially later in his studies, the exact characteristics of roetheln have formulated themselves in his mind. He has seen probably as large a number of cases as has fallen to the lot of most writers on the subject, having passed through many small local outbreaks of the disease. Though it may occur in cities at a time when measles is epidemic or prevalent, roetheln has no relation to this disease. It does not protect the patient from measles; it may occur in subjects who have had measles. It may even occur in the same patient a number of times. In other words, one attack does not give immunity from subsequent attacks. Though highly contagious, the author has met children who have been exposed and yet did not develop the exanthem.

Age.—It attacks every age from the youngest infant to adult life. The author has, as Thomas also records, seen the disease in adult life. Unlike in measles, adults do not seem to be any sicker than children, when attacked with roetheln. The throat in adults appears to present the only disagreeable symptom. Personally, I have met roetheln in nurslings as young as 7 weeks of age, as well as in adults. Thomas' youngest case was 19 months old. It shows no predilection for sexes. The prodromal period in the children I have observed gives no symptoms, except that for a few days previous to the outbreak of the eruption I have noted in the last epidemic a suffusion of the eyes, such as is often seen in an attack of grippe. The conjunctival folds have a deep-scarlet color. There is, however, no marked conjunctivitis. The children do not complain. This was so in a case I recently met in a public conveyance: the boy's eyes were of a deep-pink color. I told the mother of this fact. Four days after this, the eruption broke out on the body. In adults I had occasion to note an interesting case in a nurse who had been in an assistant capacity in a large children's clinic. For six days previous to the outbreak of the eruption she came to me to ask about a chain of glands on both sides of the neck behind the sternomastoid. Those glands had enlarged to the size of a half bean, were not painful, but only aroused uneasiness by their peculiar abrupt appearance. Six days after daily observation of these glands the exanthem appeared. There was absolutely no fever in this prodromal period. In another case, a boy 6 years old, who had been exposed, his sister having a decided attack of roetheln, the lymph-nodes along the posterior border of the sternomastoid were distinctly enlarged at the time of the appearance of the exanthema in his sister. The boy had no other symptoms. He had no fever and was at play. Two weeks after this the eruption appeared on the body of the boy and was out only one day.

The period of incubation, which may include these mild affections of the prodromal period, is placed by Thomas and Eminghaus as varying from 15 to 20 days. Eminghaus says that before the outbreak of the eruption there is some headache, nausea and irritation of the bronchial mucous membrane. Forcheimer, who was able to observe the disease in his own family, says that his child complained of slight malaise just before the outbreak of the eruption. In the largest number of cases, however the eruption is the first symptom and will bring the patient to the physician.

The Exanthema.—We may say that the exanthema of roetheln resembles that of measles so closely that at the time of onset it is quite common with physicians to mistake the one for the other. The mode of appearance is also similar to that of morbilli, in that it is first noticed around the alæ nasi and on the upper lip in an indistinct way, as is seen in the invasions of morbillous exanthema. All writers who have to-day retained any authority on the subject of roetheln agree that the exanthema appears first on the face. It is seen on the forehead at the side, at the temporal region, on the cheeks and chin. It is preceded in some cases by an erythematous flame-like blush, which is diffused over the whole face. This deep erythematous blush was described by Eminghaus. The writer has had a very good opportunity to observe it also. It breaks out on the face; it may again in a few hours disappear and reappear, to finally, in six to twelve hours, disappear and leave the real exanthema in all its characteristics spreading on the face and neck. In all the epidemics which I have observed this exanthema has the same characteristics. It is papular, of a deep rose-red color. As a rule, it remains discrete. The rose-red or roseolar papules are distinctly arranged in a crescentic manner. This arrangement can always be made out where the exanthema is spreading. On the face and neck at the outset this crescentic arrangement, present at first, gives place to a blotchy appearance characteristic of measles. At this stage, if we look at the trunk, where the exanthema is advancing, we see the crescentic arrangement of rose-red papules above referred to. The skin between and in the center of the crescentically arranged papules has a normal hue. Sometimes, in the parts where the eruption has become confluent, I have seen an appearance, punctate in character, which may be mistaken by the superficial observer for scarlet fever. In such cases, a study of other parts of the body will immediately reveal the above papules disposed in a crescentic fashion. I have been able to verify, with Thomas, that in many cases the individual rose-red papules are punctate in size all over

3. Lecons Cliniques, 1878.

the body. These cases might be mistaken for mild scarlet exanthema; but here, as in the larger form of rose-red papules or roseola, the crescentic arrangement on the other parts, as the thorax, back, buttocks, and extremities, has in all my cases been very apparent and a distinct element in establishing the diagnosis. In other words, this crescentic arrangement is exactly similar to what is seen in measles in the discrete stage of the exanthema. The exanthema will in many cases fade on the face while it spreads from the trunk to the lower extremities. In the parts in which it is spreading the exanthema retains its discrete form and crescentic arrangement. Thus it happens, if the eruption is diffuse on the face and trunk after it has been out a few hours, to the superficial observer it looks like a typical case of measles, with certain very important diagnostic reservations, which the writer will emphasize. After remaining out in full efflorescence on the face and trunk only from a few hours to a day, the exanthema begins to fade, first from the face and then from the trunk. A patient may in the next twenty-four hours present a perfectly normal skin. As a rule, evidences of the eruption continue for two or three days, especially on the extremities and lower trunk. In some cases the disappearance of the papules is complete, leaving a white skin. In other cases, though the exanthema has completely disappeared, it leaves after forty-eight hours indistinct bluish or brownish crescentic pictures occupying the place of the roseolar spots. This reminds us quite forcibly of what is seen in cases of simple erythematous eruptions. After another twenty-four hours no trace of the eruption is left. I have never seen the pigmented spots seen in true measles, which persist for days or weeks on the skin. After the disappearance of the exanthema—one to three days—there is in some few cases an indication here and there as though there might be attempted desquamation. It is not always easy to decide this point. For, among the poor, it is impossible on account of filth to decide the presence or absence of so delicate a matter as desquamation after roetheln. In the better class I have found it equally difficult to come to any definite conclusion. Thomas accepts the presence of a fine desquamation of the skin.

Mucous Membranes.—My own studies have convinced me that, unlike measles, roetheln is not a disease of the mucous membranes. In all the cases I have studied, their number is large and the severity varied, I have never seen the coryza, cough and bronchitis as it is seen in measles, even of the milder types. We find a mild and evanescent cough, seemingly caused by the injection of the pharynx and enlargement of the tonsils, which is always present. In other words, the conjunctivæ are injected, as in grippe, but there is no secretion or conjunctivitis, nor even photophobia, as in measles. In fact, the children will ask to be permitted to read. There is no conjunctival inflammation; it is simply an injection. This injection will sometimes persist for days after the exanthema has disappeared from the skin. The eyes will retain a sleepy look, but give no symptoms. If we look into the mouth at the outset of the disease we see a varying redness of the pharynx, pillars of the fauces and enlarged red tonsils. It is rather an angina that we see, similar to what is seen in very mild scarlet fever or simple angina. The glands at the angle of the jaw may be enlarged, also, as mentioned, those behind the posterior border of the sterno-mastoid muscle. The disease seems to have spent itself, as in scarlet fever, on that part of the chylopoietic system connected with the skin, as the lymph-nodes, rather than on the mucous membranes.

Thomas speaks of a spotted appearance of the mucous membrane of the soft palate and cheeks. The individual spots are not raised as those on the skin. They do not resemble the skin eruption. Eminghaus mentions the discrete red spots of the soft and hard palate. Thomas, in another article,[4] characterizes the appearance of the mucous membrane of the hard and soft palate as streaked in red in some places, in others spotted. Kassowitz, in the discussion at the International Congress, mentioned the presence of isolated red spots on the mucous membrane of the hard palate on the first day of the disease in a small percentage of the cases. Jurgensen describes an exanthema on the soft and hard palate similar to what is found in measles. Gerhardt, also, while calling attention to the injected pharynx, describes a spotted hemorrhagic eruption on the palate. Forcheimer is the most recent writer to describe a characteristic exanthema on the soft palate, consisting of a "macular, distinctly rose-red eruption on the velum of the palate and uvula, extending to, but not on, the hard palate." These spots were arranged irregularly, not crescentically. The author of this paper wishes to emphasize the fact that he does not consider any eruption on the soft or hard palate as pathognomonic or characteristic of roetheln. He has observed all of the above eruptions. In some cases the soft and hard palate are irregularly spotted or streaked red in places. In other cases, he has observed small stellate or round rose-red spots. In other cases again, the soft palate was studded with an eruption of red spots, in the center of which could be seen small vesicular formations. None of these are characteristic. They are met with in other exanthemata, such as scarlet fever or measles.

The buccal mucous membrane, however, is the crucial test in making a diagnosis of roetheln in the vast majority of cases. We never see in this location the characteristic measles spots described by the author as pathognomonic of measles. The buccal mucous membrane in most cases of roetheln is of a normal pale-pink hue. In some few cases, a vanishing percentage, I and my assistants at the clinic have observed and subsequently studied cases of roetheln in which a few rose-red spots were seen on the buccal mucous membrane. In no case, however, of true roetheln have I observed the rose-red spots with the bluish-white speck in the center seen in measles. From a study of a large number of classical and doubtful cases, the author has come to rely on the buccal mucous membrane as the only reliable means, with other symptoms and skin eruption, of distinguishing roetheln from measles. The cases of roetheln observed in New York show the buccal mucous membrane free from any eruption or exanthema throughout the disease. The buccal mucous membrane retains its pale-pink normal hue.

We find in roetheln that the temperature is highest at the outset of the disease, when the eruption has appeared on the face. The temperature does not rise when the eruption spreads on the trunk, but falls, within a few hours from the outset by a sort of crisis (Thomas), to within one or a half degree of the normal. Or the temperature may be normal in the rectum and still the eruption be at its florid state on the face or trunk. The eruption, spreading as it does in stages from the trunk to extremities, does not cause any marked disturbance of the temperature curve at the time of its spread to

4. Jahrb. f. Kinderheilk., 1872.

other parts. The temperature at the outset may be 99.8 F. in the rectum, or it may reach 102 in the rectum. I have rarely seen cases in which it was higher. It falls fully within twelve hours to 100 F. in the rectum, and may continue for a day or two at that temperature in the rectum and then fall to the normal. I have noted in those cases in which the evening rectal temperature remained 100 or 100.4 for a day or more, the throat was inflamed more than usual or the lymph-nodes at the side of the neck persisted longer.

The Lymph-nodes.—In the cases of roetheln which I have observed, the lymph-nodes behind the sternomastoid muscle, both in children and adults, were enlarged. The enlargement in the prodromal stage has already been mentioned. I have seen cases in which the patients have been distinctly exposed to the disease, who for days or weeks showed enlarged lymph-nodes in chains exactly similar to those who presented the exanthema. In these cases, in spite of daily observation, the exanthema never was seen on the skin and the nodes gradually returned to the normal without temperature. In these cases I have wondered whether the exanthema might not have been so slight and evanescent as to escape observation and disappear within a few hours. The enlargement of the nodes denotes to me an infection only of an abortive character. In one adult case, the lymph-nodes were much enlarged and the angina was marked. The exanthema appeared for only a few hours on the face and nowhere else. It was not apparent to others in the family, but was very characteristic to me. It had the papular, roseolar, circinate character.

In a recent outbreak of roetheln I and my assistants have made a study of the lymph-nodes elsewhere than in the neck. In the eleven appended consecutive cases studied in my clinic the lymph-nodes were enlarged at the bend of the elbow, the axilla and the groin. The nodes were the size of a bean or pea, in some cases larger. In all cases the lymph-nodes remained enlarged long after the eruption had disappeared from the skin. The nodes may sometimes be felt for weeks after. In other cases they rapidly grow smaller. I append the following cases simply as a matter of record:

CASE 1.—Male, 6 years; temp. 100.2; eruption full; general lymph-node enlargement.

CASE 2.—Male, 6½ years; temp. 100; eruption; general lymph-node enlargement; disappeared in two days.

CASE 3.—Male, 1 year, 2 months; temp. 99.8; eruption,; lymph-nodes generally enlarged.

CASE 4.—Male, 7 years; temp. 98.5; eruption; lymph-nodes generally enlarged.

CASE 5.—Female, 5 years; temp. 99; eruption; lymph-nodes generally enlarged.

CASE 6.—Male, 6 years; temp. 100.8; eruption; lymph-nodes generally enlarged.

CASE 7.—Male, 5 years; temp. 100; eruption; lymph-nodes large.

CASE 8.—Male, 4 years; temp. 100.2; eruption; lymph-nodes large.

CASE 9.—Female, 19 months; eruption; lymph-nodes large.

CASE 10.—Female, 7 weeks old; temp. 98.6; only lymph-nodes of neck large.

CASE 11.—Male, 2 years; general enlargement of nodes.

The Angina.—In the great majority of cases there is a distinct enlargement of the tonsils; they are red and inflamed, and the pillars of the fauces are inflamed also. The lymph-glands at the angle of the jaw may be slightly enlarged. The angina is never as severe as in scarlet fever. The patients do not complain much of the throat if they are older children; adults complain of slight pain in swallowing and a feeling of "cold in the head." In no case have I seen any membranous formation on the tonsils. I have examined a number of cases with special reference to the size of the spleen. In varicella the spleen is sometimes palpably enlarged. In roetheln I have never noted this. In one case of roetheln, occurring in a girl of 7 years, in whom the exanthema was profuse, there was dysuria of a very annoying character. In this case an examination of the introitus vaginæ revealed intense redness and slight secretion. The symptoms disappeared without further treatment.

Eruptions Resembling Those of Roetheln.—There are some forms of erythema multiforme, which by an inexperienced observer might be mistaken for that of roetheln. I refer to the forms of erythema which occur in small papules. These erythemas fail to show the crescentic arrangement of papules, and in places we will have a blotchy character to the eruption. Erythemas also have an ecchymotic or bluish color, especially at the center of the papule. In some cases we can understand how a papular rose-colored eruption caused by a drug or antitoxin might be mistaken for the exanthema of roetheln. Scarlet fever does not affect the face so distinctly, and on the trunk scarlet fever shows the acute dermatitis as a background for the punctate character of the general eruption. In scarlet fever the small punctate spots have no particular arrangement; in roetheln, if the papules have the minute size of those of scarlet fever, the skin between the papules has a normal color. In all of these cases, also, we can make out a crescentic arrangement of the papules.

The exanthema of measles of the discrete type is the only eruption which so closely resembles that of roetheln as to be constantly mistaken for it. In fact, I have frequently seen physicians unhesitatingly pronounce a case of measles and insist on the diagnosis when only roetheln was present. In all such cases the buccal mucous membrane has been the crucial test for me. It has invariably maintained the truth of the diagnosis in the subsequent course of the disease. As the disease progresses I have never noted in roetheln the tendency of papules to become confluent over any great extent of surface, as seen in measles. At least in the New York cases we have always seen the skin not affected by papules of a normal color and consistency.

Roetheln deserves the dignity of a disease distinct from measles or scarlet fever. It does not protect the subject from either of the two affections named. This will, in my mind, account for a vast number of cases in which there is said to have been two attacks of measles. Roetheln is a mild affection, resembling very much varicella. There have never, to my observation, occurred complications which could give rise to any uneasiness. The temperature at the very highest never goes beyond 103 F., and in most cases in New York the temperature never mounts above 101 F. The general condition of a patient is that of a person suffering only a slight malaise. I have never seen nephritic complications in this disease. It requires little or no treatment. I advise the parents to keep the children indoors until all signs of the exanthema have disappeared; the children are then allowed in the open. In the winter months the children are kept indoors about a week after the first day of the eruption. I have seen no sequelæ in any of my cases. The most important point to me has always been the positive differentiation of this disease from measles or morbilli. We may thus avoid

isolation of the children for three weeks in summer and four weeks in winter, which is necessary in measles. This, in private families, and even in institutions, is a most important matter.

As the writer closed this article he received a reprint of an article by Ad. Schmidt, coming from Escherich's clinic. Among some very interesting data, we find that in a roetheln epidemic in Graz, the "Koplik spots" were studied as to the frequency of their occurrence or absence. It was found that they were invariably absent. Schmidt concludes that the absence of this sign is valuable in building up the diagnosis of roetheln. It will be admitted on all sides that in marasmic children, in whom the mucous membrane has been the subject of prolonged traumatism, the diagnosis of "Koplik spots" may at times be difficult.

A CLINICAL AND PATHOLOGICAL STUDY OF THE RASH OF SCARLET FEVER.*

WITH ESPECIAL REFERENCE TO THE ORIGIN AND CHARACTER OF THE DESQUAMATION.

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PHILADELPHIA.

The eruption of scarlet fever is a dermatitis presenting a remarkable constancy in its general characteristics. This is true to such an extent that the clinician has in his mind a concrete picture of this efflorescence. Yet, like inflammation in any other structure, this pathologic process in the skin varies in severity in different patients. There must therefore be a certain degree of variation in the clinical appearances of the eruption.

The redness of the skin of scarlatina has been variously described as bright red, scarlet, raspberry-juice tint, boiled-lobster tint, etc. It is a matter of the greatest difficulty to carry color valuations in one's mind. It is an impossible task for the artist to view a sunset, and then at some future time transfer its coloration to canvas. It is equally impossible to view an eruption and later accurately compare its color with that of some other object. One must have both colors simultaneously before the eye. When pieces of the shell of boiled lobster are compared at the bed-side with the color of the rash of scarlatina a wide difference in the tints is observed. So, too, is it impossible to match the eruption of scarlet fever with any of the shades of bright red or scarlet. In order to accurately reproduce the tint with water-colors one must employ an admixture of red, burnt sienna, yellow and blue. The color of any inflammatory eruption is due to the blood appearing through the texture of the skin. The amount of blood in the part, as determined by the caliber of the cutaneous blood-vessels, and the character of the blood itself influence this coloration. It is therefore evident that the color must vary within certain limitations in different individuals. The color of the eruption in scarlet fever is reddish, sometimes bright, at other times dull or dusky, with an appreciable element of brown. Sometimes the eruption is so brownish-red as to almost approach a bright terra-cotta. Sometimes the element of blue is so well marked, particularly in dependent areas of the skin such as on the back, as to be quite purplish, owing to venous congestion. The majority of eruptions, it appears to me, would deserve the description of dull-red rather than bright-red. The color varies not only in different individuals, but at different stages in the same individual. A bright-red eruption may become dusky or brownish-red in the course of a few days.

On close inspection the rash of scarlet fever is seen to be made up of small deep-red puncta surrounded by erythematous areolæ of somewhat brighter hue. When the areolæ coalesce, as is usually the case, a diffuse eruption is presented. At times, however, there is some intervening normal skin giving the eruption a more or less speckled appearance. This is more particularly noted upon the flexor surfaces of the fore-arms, in which region the efflorescence may be so blotchy as to excite a suspicion of measles. These deep-red puncta represent, for the greater part, inflammatory cellular infiltration about the hair follicles, and will be discussed more fully in the pathological report to follow.

Many scarlatina eruptions exhibit small pin-point to pin-head sized elevations occurring, in the main, at the sites of hair follicles. This condition has been termed by the older writers "scarlatina papulosa." In addition to these elevations, an appearance not infrequently noted is a general "goose flesh" condition of the skin. This is best marked upon the abdomen and chest, and is characterized by numerous pin-head sized papules bearing a close resemblance to the "cutis anserina" evoked in the normal skin by exposure to either extreme of temperature. These papules may be of the normal skin tint or reddish. They may make their appearance a day or two after the onset of the disease, and usually persist from three to six days. At times this condition is so marked as to give the skin a "nutmeg grater" feel and appearance.

In the older descriptions of the scarlet fever eruption, one reads of the occurrence of sudamina. Inasmuch as the skin in scarlet fever is hot and dry, with no tendency to sweating, one would scarcely expect to find such lesions present. Sudamina are dew-drop like vesicles with an extremely thin roof, occurring at the mouths of the sudoriferous ducts, and merely represent drops of sweat retained by an obstructive epithelial pellicle. That true vesicles do occur, however, in scarlet fever has been noted by numerous observers. To this condition the term "scarlatina miliaris" or "scarlatina vesicularis" has been given. The term miliary vesicle should be understood as referring to a vesicle the size of a millet seed, and in no way related to miliaria or prickly heat, which is an affection associated with disorder of the sweat glands and ducts.

The vesicles of scarlet fever are conical, epidermal elevations, pin-point to pin-head in size, with turbid contents, and usually disseminated, although they may occur in groups. They are commonly situated on the abdomen and chest, to a lesser extent on the extremities. On the back they are less common. The region in which they are frequently most profusely present is the mons veneris, for here the erythema is apt to be most intense. In this region they are prone to develop into well-marked yellowish pustules. The accompanying photograph shows a group of these vesicles occurring about the anterior axillary folds in a well-marked eruption in an adult. (Fig. 1.) Rarely these vesicles may coalesce, forming blebs of the size of a pea or larger, constituting the "scarlatina pemphigoidea" of the older writers.

What is the frequency of these vesicles and what is their nature? Do they, or do they not bear a relation-

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ship to the intensity of the scarlet fever eruption? Do they influence the desquamation? These are questions which have a direct practical import, and have been argued variously. During the past few years I have had the opportunity of examining several hundred cases of scarlet fever, with the object of studying the character of the eruption in general, and the vesiculation in particular. From these observations I should conclude that vesicles are present in the vast majority, if not all of the cases, of scarlatina. In decidedly exceptional cases they are so marked as to confound the clinician in the diagnosis, by suggesting a disease other than scarlet fever. Dr. J. P. C. Griffith, of Philadelphia, has recently reported several such cases. In these cases the vesicular character of the eruption is its most striking feature. In perhaps 20 per cent. of all the cases, and 50 per cent. of well-marked eruptions, vesicles are visible if looked for. Ordinarily pin-point or pin-head sized lesions do not intrude themselves upon one's vision

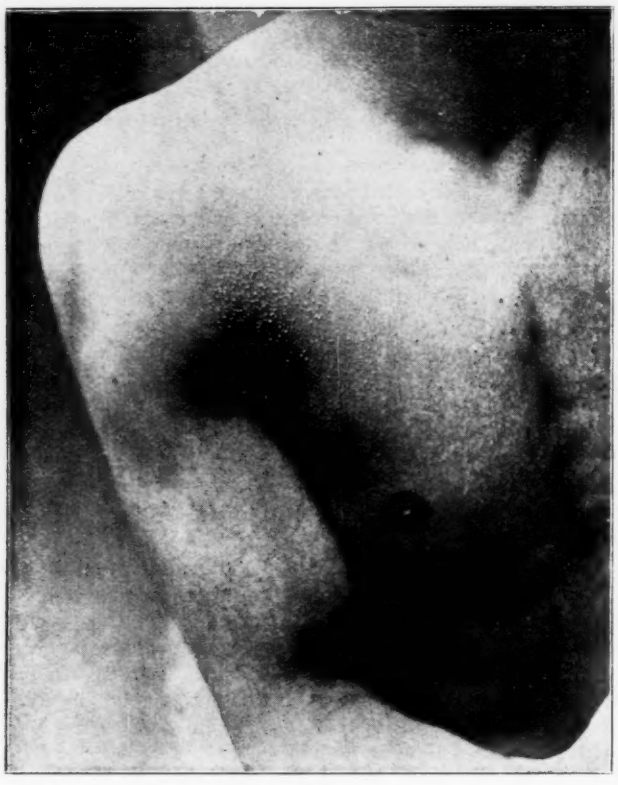

Fig. 1.—Grouped miliary vesicles about the anterior axillary fold in a case of scarlet fever.

and are apt to be overlooked in a cursory inspection of the rash. In a large number of the remaining cases they can only be seen by the closest scrutiny of the skin under the best possible illumination. Finally, there are some which can not be seen with the naked eye but are demonstrable under the microscope. In certain excised sections of the skin, I found vesicles microscopically which I could not previously detect by the closest examination of the integument.

Vesicles are more often and more prominently visible in severe eruptions than in mild rashes. It is true that they may be quite conspicuous at times in patients who have but little rash, and this has led some observers to conclude that they bear no relation to the intensity of the eruption. A study of a large number of cases will, however, demonstrate that they are more copious in intense eruptions, and this is confirmed by the appearances under the microscope, demonstrating the vesicles to be distinctly inflammatory in character.

I believe the intensity of desquamation to be directly proportionate to the amount of vesiculation. If one will watch for the first appearance of desquamation on the trunk, it will be noticed as a number of discrete, pin-point, powdery scales. These represent the summits of the desiccated vesicles. In a day or two this scale is cast off, thus producing a small jagged ring of desquamation. The horny layer of the epidermis is now lifted off by centrifugal extension of these rings, which grow constantly larger. On meeting enlarging rings of neighboring lesions they produce gyrate and geographic configurations resembling the contours of a map. This is

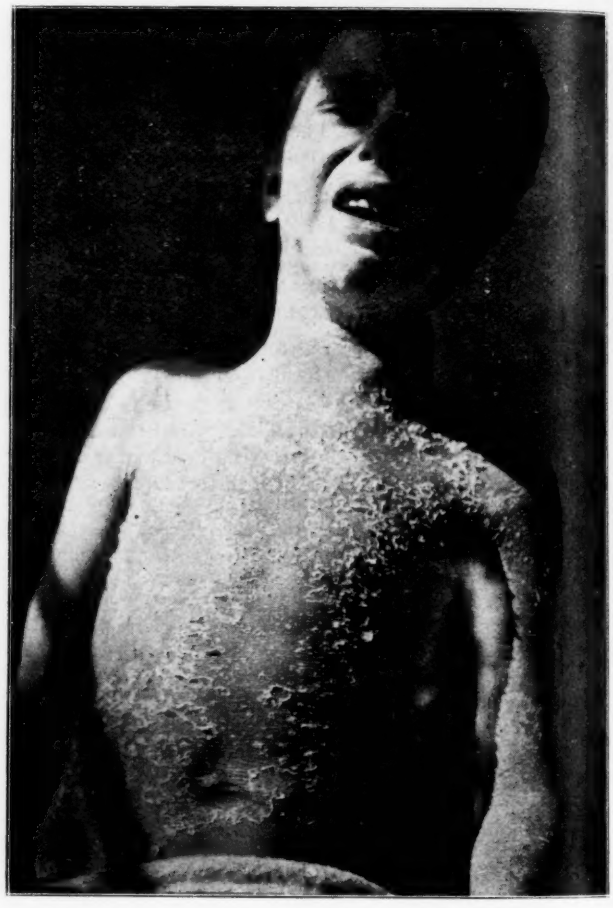

Fig. 2.—Unusually intense desquamation in a severe case of scarlet fever. Ring character of desquamation shown.

well illustrated in the photographs (Figs. 2 and 3) which I herewith present for your inspection. In this manner the entire corneous layer of the skin is removed.

This I believe to be the almost invariable character of the desquamation on the trunk. On the hands and feet the desquamation is different, and this because of a difference in the anatomical structure of the skin. The horny layer of the epidermis on the hands and feet is tougher and thicker than elsewhere on the body. Inasmuch as a serous exudate from the blood-vessels travels in the direction of least resistance, it burrows its way beneath the horny layer instead of lifting it up at different points in the form of vesicles. In this manner, in severe eruptions, the horny cuticle is raised *en masse*, with the result that there is shed an entire epidermal cast of the hands or feet. The photograph (Fig. 4) herewith shown well represents this type of

desquamation. In less severe cases the epidermis of the hands peel off in lamellæ or flakes. This, beginning at the free border of the nails or at the nail folds, constitutes a highly diagnostic picture. (Fig. 5.)

I am convinced that too much stress in the diagnosis of scarlet fever has been placed on the mere occurrence of desquamation. Desquamation is the terminal stage of certain inflammatory changes in the skin and is not at all peculiar to any one disease. The rash of scarlet fever is an infectious dermatitis. There are other forms of eruptions of infectious origin bearing such a striking resemblance to scarlet fever that they can not by themselves be differentiated. They are grouped under the

Fig. 3.—Desquamation upon the neck and chest in an average case of scarlet fever.

one term "scarlatiniform erythema," although there may be a variety of causes giving rise to them. One distinguishing feature of these rashes is a tendency to recurrence.

The persistence of the scarlet fever desquamation and its special characteristics are of more diagnostic importance than the mere existence of scaling. It is rather remarkable that a rash lasting but five or six days should continue to scale for seven, eight or nine weeks. This may be explained by certain pathologic phenomena presently to be described. At the same time it should be borne in mind that it is possible to have a rash so extremely mild and fugacious as to be followed by a barely detectable desquamation.

I am not able to say to what extent vesicles occur in the erythemata resembling scarlatina, and the differential importance of the "jagged-ring desquamation" is therefore still to be determined. I have occasionally seen a few small vesicles in severe cases of measles, and these may account for the scaling that sometimes takes place in this disease.

HISTOPATHOLOGY.[1]

The pathology of the skin in scarlatina has been investigated by Kaposi, Klein, Neumann, Delafield and Prudden, Unna, Pearce and others. They all agree, in the main, as regards their findings: There is a dilatation of the blood-vessels and lymphatics; an infiltration of lymphoid cells and polymorphonuclear leucocytes into the papillary layer; later an invasion of the rete mucosum by leucocytes; mitosis and proliferation of the deeper rete cells. Neumann mentions slight proliferation about the hair-follicles. All of these observers evidently excised for examination areas of the smooth skin. The sections referred to in this paper represent papules, vesicles, puncta, etc., as well as the erythematous rash surrounding them. My results are in accord with those above mentioned, but in addition I have attempted

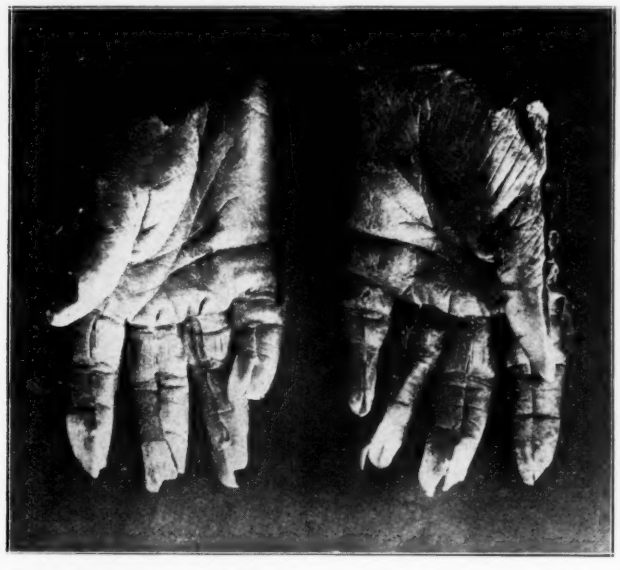

Fig. 4.—Pair of epidermal casts of the hands cast off in a fatal case of scarlet fever.

to describe the histopathology of these other elements of the rash.

The histopathologic data herewith presented are based on a study of about 400 sections of skin representing 13 specimens removed during life from 12 cases of scarlet fever. The skin was excised by means of a Keyes skin-punch, after previous injection into the subcutaneous tissue of a 1 per cent. solution of cocain. The excisions were performed upon patients representing stages of the disease from the second to the seventh day.

The sections were hardened in successive strengths of alcohol, imbedded in paraffin, and stained in hemotoxylin-eosin, thionin, eosin-polychrom-methlene blue and the Weigart-Gram stain. A brief description of the different specimens is herewith appended, with a clinical note describing the lesions before excision.

CASE 1.—J. B., age 6. Profuse erythemato-vesicular rash. Redness very vivid and vesicles remarkably numerous. Area showing a pin-head central vesicle with a hair perforating, and a few smaller peripheral epidermal elevations, excised from the trochanteric region.

Under low power the section is seen to contain four hair follicles. At the mouth of the central follicle is a

1 From the Polyclinic Laboratory, Philadelphia.

large crateriform cup filled with a mass of leucocytes and epithelial débris. (Fig. 6.) This connects with the lumen of the follicle. The epithelium of the hair-follicle is infiltrated with numerous polymorphonuclear leucocytes. To the right of this is another smaller hair-follicle, which is also the seat of extensive pathologic change. At the surface of this follicle is a small horizontally oval space containing serum and a deeply-stained mass of cells, and covered by the horny layer of the epidermis. The lower half of the follicle is extensively disintegrated by a serous exudate, which has broken into the follicle, separated the epithelial cells and formed a lake in which may be seen numerous leucocytes. (Fig. 7.) The follicle is furthermore infiltrated with and surrounded by a dense mass of lymphoid cells and polymorphonuclear leucocytes. At the extreme end of the section is another follicle showing a circular space at the surface, filled with serum and leucocytes. The middle third of the follicle exhibits a serous and leucocytic invasion, which surrounds the hair seen *in situ*. (Fig. 8.) Between the two follicles just described there is seen a circular abscess in the epidermis filled with fluid and densely packed with leucocytes. This occupies an area between the horny layer above and the lowermost strata of cells of the rete mucosum. Numerous rete cells are seen detached and floating about in the exudate. The neighboring portions of the Malpighian layer are invaded with polymorphonuclear leucocytes. (Fig. 9.) The specimen, furthermore, shows a dilation of the blood-vessels and lymph-spaces, a deep-cell infiltration throughout the corium and about the coils of the sweat glands.

Fig. 5.—Marked desquamation in large flakes upon the hands.

CASE 2.—S. M., age 7. Well marked rash. Superficial vesicle excised from abdomen on fourth day of disease.

Sections were stained in hematoxylin-eosin and eosin-polychrom-methylene blue. Under low power the center of the section is seen to be occupied by a vesicle having its seat in the rete mucosum and its roof formed by the horny layer. Directly contiguous to this is a hair-follicle which shows extensive serous exudation and leucocytes in its lower extremity deep in the corium. (Fig. 10.) The papillary layer is the seat of an extensive infiltration of lymphoid cells and polymorphonuclear leucocytes. There is marked dilatation of the papillary blood-vessels, which are seen to be filled and surrounded by cell exudate. In sections stained with hematoxylin-eosin, are seen numerous multinucleated perivascular cells with red granular protoplasm. These are eosinophile cells. Sections stained with the eosin-polychrom-methylene blue show numerous mast-cells, particularly about the blood-vessels and walls of the hair-follicles. The epidermis exhibits a marked invasion of migratory cells which may be seen at all levels. There are also visible mitotic figures in the prickle-cells of the Malpighian layer. The accompanying photograph (Fig. 11) represents a section which shows several nuclei undergoing karyokinetic change. The daughter asters are well seen in the lowermost of the cells. These mitoses occupy cells about the center of the Malpighian layer.

CASE 3.—B. S., age 12. At the outset, a typical punctiform rash. On the sixth day the patient was seen again and showed a distinct goose-flesh papular appearance. A goose-flesh papule of normal skin tint was excised from the lateral aspect of the chest. Several smaller papules present.

Under low power the center of the section is seen to be occupied by a hair-follicle. Smaller follicles are situated at either end. About the central follicle is a well-marked infiltration of lymphoid cells and polymorphonuclear leucocytes. The epithelial cells of the follicles are broken into and pushed aside by a serous and cellular exudate. The same process, omitting the serous effusion, is present in the smaller follicles. The papillary and subpapillary vessels are dilated and filled and surrounded by lymphoid cells. There is a moderate number of oval and stellate mast-cells in the neighborhood of the walls of the follicles. In the perivascular infiltration may be seen small numbers of eosinophile cells. Sections stained in hematoxylin-eosin, thionin, and polychrom-methylene blue.

CASE 4.—F. H., age 10. Well marked rash, punctiform with scattered small vesicles. An area of skin, on which was seated a barely discernible vesicle, was excised from the side of the chest upon the seventh day. (Lesion is probably a vesicle, but can only be detected on close scrutiny of the skin.)

Under low power there is seen in the center of the section a superficial hair-pocket, the lumen of which is dilated and filled with leucocytic débris. The epithelial walls are disintegrated by an invasion of leucocytes. (Fig. 12.) The papillary layer of the corium is the seat of an intense infiltration of lymphoid cells and polymorphonuclear leucocytes. There is a dilatation of the blood-vessels and lymphatics and a marked perivascular cell infiltration. Leucocytes are visible between the prickle-cells of the rete mucosum. Mast-cells are present in small numbers. Sections stained in hematoxylin-eosin and eosin-polychrom-methylene blue.

CASE 5.—B. C., age 29. Eruption intense with hemorrhagic tendency. A punctuated spot, not disappearing on pressure, excised from right side of chest on fourth day of disease.

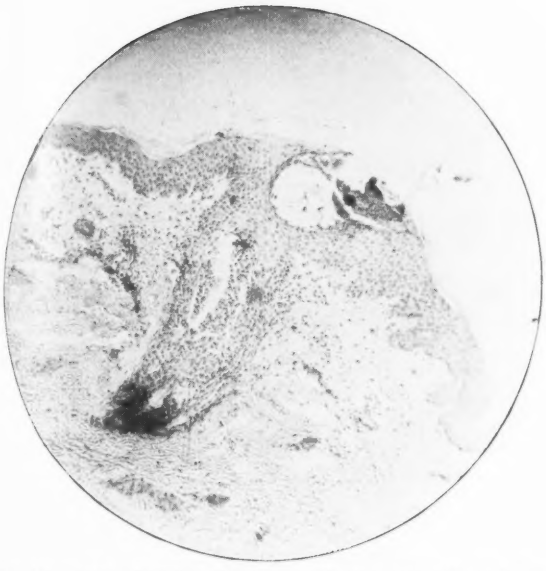

Fig. 12.—Hair follicle showing vesicular summit and serous cellular infiltration. Magnified 70 diameters.

Fig. 13.—Vesicle at mouth of hair follicle connecting directly with the lumen. Magnified 70 diameters.

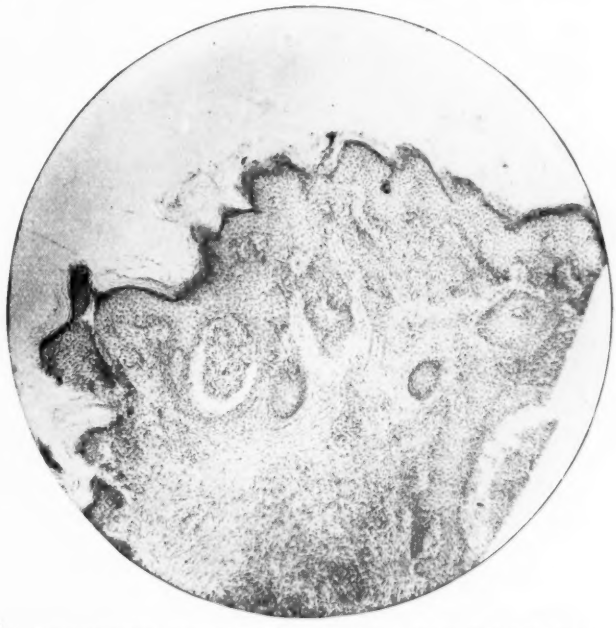

Fig. 15.—Circumscribed vesicle in the epidermis. Magnified 140 diameters.

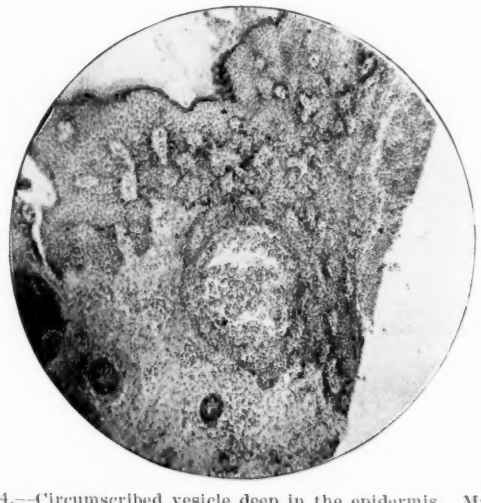

Fig. 14.—Circumscribed vesicle deep in the epidermis. Magnified 140 diameters.

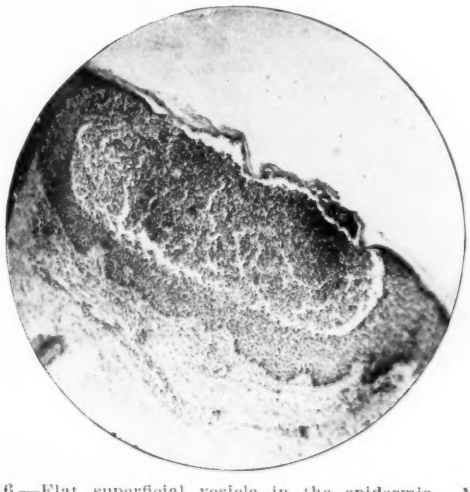

Fig. 16.—Flat superficial vesicle in the epidermis. Magnified 70 diameters.

Fig. 6.—Large vesicle at the mouth of a hair follicle. Magnified 145 diameters.

Fig. 7.—Hair follicle showing superficial vesicle, disintegration by severe exudate, and surrounding cell infiltration. Magnified 145 diameters.

Fig. 8.—Two hair follicles with vesicles at the surface; both follicles disintegrated by serous exudate and surrounded by cellular infiltration. Also small vesicle in epidermis. Magnified 70 diameters.

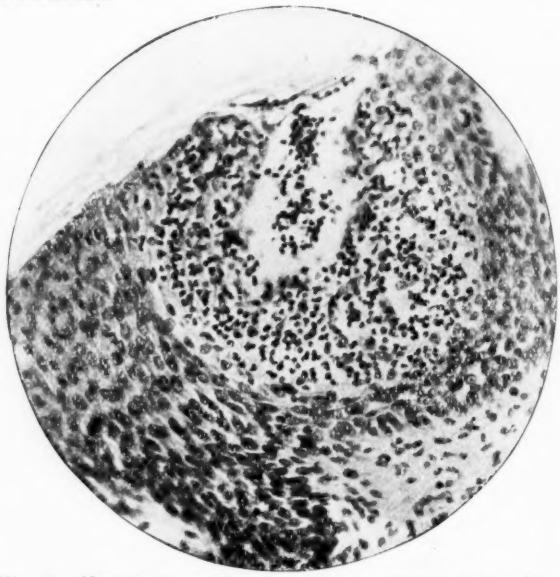

Fig. 9.—Vesicle in epidermis showing circumscribed lake of serum filled with leucocytes. Magnified 300 diameters.

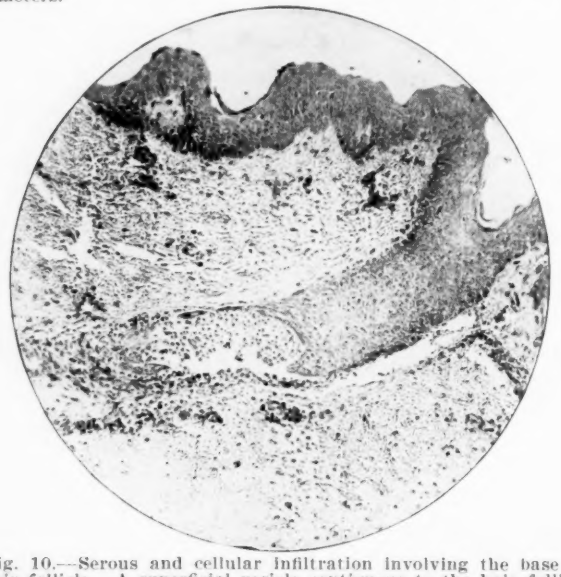

Fig. 10.—Serous and cellular infiltration involving the base of a hair follicle. A superficial vesicle contiguous to the hair follicle is not shown in the cut. Magnified 145 diameters.

Fig. 11.—Karyokinetic figures in the prickle cells of the rete mucosum. Magnified 1150 diameters.

In the center are a hair-follicle and sebaceous gland seen in cross section. These are surrounded by an extensive infiltration of polymorphonuclear leucocytes. The papillary blood-vessels are dilated and surrounded by an exudate of lymphoid cells and polymorphonuclear leucocytes, chiefly the latter. The rete mucosum shows leucocytes infiltrated between its cells.

CASE 6.—R. O., age 4. Well-marked eruption. Small epidermal elevation (vesicle) was excised from lateral aspect of chest on the second day of the disease.

The center of the section is occupied by a hair-follicle. In the mouth is seen a vesicle filled with serum and leucocytes. In some sections the vesicle is shut off from the lumen of the follicle; in others, however (Fig. 13), it is seen directly communicating with the lumen, so that there is practically a clear space extending from the horny layer to the base of the follicle. The epithelium of the follicle is disintegrated as a result of serous and cellular infiltration. The walls of the hair-follicle are surrounded by an extensive cell infiltration running parallel to the walls. The papillary blood-vessels are enormously distended and are filled and surrounded with lymphoid cells and polymorphonuclear leucocytes. Sections stained with the Weigert-Gram stain were examined for micro-organisms, but none were found.

CASE 7.—R. O. Same patient as Case 6. Redness fading. Minute vesicle with scaly summit was excised from the side of the chest on the fourth day.

The center of the section is occupied by a hair-follicle, which is surrounded by an intense lymphoid cell and polymorpholeucocytic infiltration. The papillary and subpapillary blood-vessels are dilated and are surrounded by an intense cell exudate. Mast-cells are present in small numbers.

CASE 8.—E. C., age 25. Well-marked eruption. Skin infiltrated. Section of skin with small vesicle on it excised from anterior surface of forearm.

Under low power, are visible two large circumscribed vesicles occupying the rete mucosum, which is cut obliquely and appears to be considerably hypertrophied. The larger of these extends from the horny layer to lowermost strata of rete cells. It is filled with serum, in which are visible densely packed leucocytes. The walls of the vesicle are made up of several layers of flattened rete cells. The other vesicle occupies an area of the rete mucosum at the nether extremity of a prolongation, and appears almost to be snared off in the corium. (Figs. 14, 15 and 16.) There are visible in different places, in the upper portion of the rete, in the granular layer and even in the horny stratum circumscribed masses of leucocytes, without serous effusion. It is possible that desiccation has taken place through absorption of the fluid. Polymorphonuclear leucocytes are seen in abundance invading the rete mucosum. The papillary and subpapillary blood-vessels are distended and surrounded by a marked cell infiltration. The entire corium is infiltrated with cells, many of which appear to be derived from fixed connective-tissue cells. No hair-follicles or sebaceous glands are visible in the section.

CASE 9.—M. M., age 25. Well-marked rash. Reddish elevated punctum (apparently at the site of a hair-follicle), excised from the lateral aspect of the chest on fourth day.

In the center of the section are a hair-follicle and sebaceous gland in cross section. The follicle is surrounded by considerable cell infiltration. Many of the cells of the sebaceous glands are undergoing fatty degeneration; their nuclei are shrunken and distorted. The subpapillary blood-vessels are greatly distended and exhibit an intense perivascular infiltration. The lymph spaces are dilated and contain a cell infiltration.

CASE 10.—J. N., age 4. Well-marked eruption. A papule (possibly papule-vesicle), excised from thigh on second day of disease.

Under low pressure there is visible a cell infiltration in the papillary layer and throughout the entire corium. In the center of the section is a hair-follicle surrounded by an intense cell infiltration. The sweat coils are likewise infiltrated. No evidence of any vesicle present.

CASE 11.—H. M., age 6. Well-marked eruption. Section of skin 6 mm. in diameter, on which were several small puncta but no vesicles, excised from trochanteric region on third day.

Section shows an enormous dilation of the blood-vessels and lymph spaces. These are surrounded with lymphoid cells and polymorphonuclear leucocytes. A large hair-follicle in the section is surrounded by a moderate cell infiltration. There is also visible a sweat duct, the lumen of which is blocked with endothelial cells. Free blood is seen in many of the lymph spaces.

CASE 12.—R. F., age 4. Little or no redness present. Small area of skin excised third day, on which were seated two or three goose-flesh papules.

The papillary layer of the corium shows an infiltration of lymphoid cells, chiefly about the blood-vessels. Blood-vesssels and lymph spaces are dilated. No hair-follicles present in the sections examined.

CASE 13.—H. G., age 22. On entrance to hospital she presented a deep, diffuse, smooth eruption over entire body. No visible elevations at this time. On sixth day redness largely faded. Scattered pin-head translucent vesicles (with difficulty visible). One of these excised from lateral aspect of trunk.

Cell infiltration appears in papillary layer of corium; likewise dilatation of blood-vessels, which are filled and surrounded by lymphoid cells and polymorphonuclear leucocytes. Small number of mast-cells and eosinophiles are present. There is no evidence of vesiculation. (It is possible that the central sections which should have shown the vesicle, were lost in the section cutting.)

Let us now interpret the clinical lessons in the light of the histopathological findings. When an area of skin representing a smooth erythema is excised, one finds the common phenomena of an acute simple dermatitis. There is dilatation of the blood-vessels, an exudation of lymphoid cells and polymorphonuclear leucocytes into the papillary layer, with some invasion of the epidermis by the migratory cells.

The goose-flesh papulation is not a mere temporary condition due to contraction of the hair-muscles, but results from an extensive infiltration in and about the hair-follicles, and therefore persists until the inflammatory phenomena subside.

Papules represent cellular infiltration, for the greater part in and about hair-follicles. The transition from a papule to a vesicle is a comparatively rapid one, and papulo-vesicles are of common occurrence.

Vesicles are invariably characterized under the microscope by a lake of serum containing a leucocytic infiltrate. These vesicles may have their seat in the deeper layers of the rete, or they may be intrafollicular, involving the hair-follicles. In either case there is a pushing aside and disintegration of the cells of the rete layer by a fluid exudation from the papillary blood vesicles. The turbidity of the contents of these vesicles is due to their invasion by leucocytes. In the attempt on the part of nature to eliminate the materies morbi, the leucocytic mass travels toward the surface lifting up the horny layer. Desiccation of the liquid contents of

the vesicles now takes place. This is immediately followed by a throwing off of the effete products. At this stage, clinically, the small powdery scale is seen at the summit of the dried vesicle. The leucocytes in the epidermis wander laterally as well as directly toward the surface, and lift off the horny layer on the periphery of the vesicle. In the section from Case 1, which represented an area of skin ¼ of an inch (6 mm.) in diameter, there were four vesicles, only one of which could have been seen by a casual inspection of the skin; two were visible on close scrutiny, and one not at all with the naked eye.

The punctated spot in several sections proved to be a hair-follicle surrounded by marked cell infiltration. The punctum may, however, show merely dilatation of the blood-vessels, with intense perivascular cell exudation. The number of puncta examined was too small to form any absolute conclusion as to the frequency of their occurrence about hair-follicles.

It will be noted that the hair-follicles and sebaceous glands suffer very greatly in the inflammatory process in the skin in scarlatina. It would seem that goose-flesh papules, puncta, and vesicles all occur more frequently about the pilary pockets than elsewhere in the skin. The depth at which these follicles are involved explains the persistence of desquamation. The walls of the hair-follicles are made up largely of cells corresponding to the rete layer of the epidermis. These being disintegrated by the leucocytic infiltration, must be thrown off with it. The depth from which these cells are derived necessarily makes the process a slow one. The persistence of the infectivity of the scales is explicable on the same grounds. There is every reason to believe that the infectious principle is contained in the leucocytes or epithelial débris cast off from the skin. Unfortunately but a few sections were stained for microorganisms and in these none could be discovered with the ordinary stains employed for this purpose.

In none of the sections was there any enlargement of the papillæ, and therefore the statement made to the contrary in some text-books would seem to have no basis in fact.

Karyokinetic figures are seen in many sections and indicate a proliferation of the epidermal cells, which are perhaps stimulated by the leucocytic invasion. Attacks of second and third desquamation may possibly be due to this cause.

The foregoing observations suggest the following inferences:

1. The color of the rash in scarlatina varies in different individuals, and at different times in the same. Accurately speaking, it is never scarlet and only occasionally bright red. More commonly it is a dull red with an appreciable element of brown.

2. There are other elements of the eruption of scarlet fever besides the erythema, namely, puncta, vesicles and goose-flesh papules, and these lesions occur with a considerable degree of constancy.

3. Vesicles are far more common in the rash of scarlet fever than is ordinarily believed. They are more profuse in intense eruptions, although they may be present in mild ones. The amount of desquamation is as a rule proportionate to the degree of vesiculation. Vesiculation may be so copious as to deceive the physician in his diagnosis.

4. Desquamation on the body begins as pin-point, powdery scales at the summits of the desiccated vesicles. Irregular or jagged rings of desquamation then form, which enlarge until the horny layer is completely shed.

5. Histologically, the rash of scarlet fever is a dermatitis exhibiting deep and extensive changes in the corium. The greatest degree of inflammation is exhibited about the hair-follicles, which are frequently disintegrated by a serous and cellular exudate. Vesicles have their seat either in the epidermis or in the walls of the hair-follicles. The persistence of desquamation and of the infectivity of the scales is to be accounted for by the depth of the pathological process in the skin.

I desire to express my most cordial thanks to my friend Dr. William M. Welch, Chief of the Municipal Hospital for Infectious Diseases, of Philadelphia, for the privilege of studying the valuable material which that institution affords.

DISCUSSION ON PAPERS OF DRS. DANIEL, SMALL, WAHRER, KOPLIK AND SCHAMBERG.*

DR. C. F. WAHRER, Fort Madison, Ia.—I have read descriptions in the various text-books of the exanthemata, and I think they vary almost as much as physicians do. Painters have used their art to paint sunsets, yet one sunset does not look like another. It is very difficult to teach a beginner in medicine, from description alone; it is really only by actual clinical observation that any one can learn. It is possible that with the aid of color photography we may be able to accomplish this, but I doubt it. It is difficult for most of us to recognize the fine distinctions made. If you will read in different text-books the description of the eruptions of scarlatina, measles and rötheln, I think you will agree with me that it will take more than a Philadelphia doctor to distinguish between them. In many texts a description of one may easily suit the description of another by some other writer. Skin diseases can be learned only by accurate observation of patients having the diseases.

DR. J. P. C. GRIFFITH, Philadelphia—I think that the doctrine advanced by Dr. Wahrer will hardly meet with the approval of the Section. I doubt if very many of us would be willing to expose our children to the infection of measles. It looks to me very much like doing evil that good may come. I have been very much impressed with the fact that one of our large European cities has recently shown more deaths from measles than from scarlet fever or diphtheria. Such statistics, moreover, do not express, of course, the full number of deaths from measles, because pneumonia, bronchopneumonia and various other complications of measles cause death, which are assigned in the certificates to these causes and not to measles.

A good many years ago I become interested in rötheln, or rubella as it is better named. I have repeatedly seen a desquamation in rubella, although it is oftener absent than present. This desquamation resembles closely that of measles, though it is not so marked. The rash in the mouth, described by Dr. Forchheimer, I have seen and described, but we can not say that rubella is absent because the rash is not present. The temperature curve has not seemed to me to be at all characteristic. It is true the temperature very frequently falls early, but not always. The rash often runs over the body like a "wave," as someone has described it, being gone from the face when it reaches the feet, and having disappeared from the body, with the exception of a yellowish stain, within twenty-four or forty-eight hours.

About ten years ago my attention was called to the enlargement of the superficial cervical glands in the cases of measles. I was soon struck with the fact that in the majority of cases of measles in which I looked for this enlargement I found it. A writer in Wood's "Reference Handbook" has called attention to the same fact. I admit that the enlargement is greater, more characteristic and more common in rubella, but it not sufficiently so to form a positive diagnostic feature.

The diagnosis of rubella is often extremely puzzling to all of us. In institution work I have had in one bed a child with a rash resembling measles so exactly that in private practice I would not have been able to differentiate it, and at the same

*The papers of Drs. Daniel and Small, discussed here, were printed in THE JOURNAL of Oct. 27.

time in another bed a child with a rash apparently perfectly typical of scarlet fever. This fact has also been noticed by other observers.

Dr. Schamberg's paper is one of the most valuable I have listened to for a long time, and I would feel a hesitancy about opposing it in any way were it not for his statement that widespread development of vesicles depends on the intensity of the rash. If this were not so, then every child having the deepest and most intense efflorescence should have the greatest development of vesicles, which, I think, you will all say is not so. The same thing is true of the desquamation. Some children will peel and peel, although they have not had an especially severe eruption. My own opinion is that of Thomas, who wrote the article on "Scarlatina" in Ziemssen's "Cyclopedia," namely, that the degree of the development of vesicles depends on some peculiarity in the skin of the individual child.

Dr. Louis Fischer, New York—I have been extremely interested in the three foregoing papers. I would endorse what Dr. Griffith has said about Dr. Wahrer's paper. Those of us who have seen a great many cases of measles know what a dangerous disease it is at times. In the past winter I have seen more cases of otitis media and of empyema following measles than I have seen in the past five or six years. Many other pediatricians with whom I have spoken have noticed the same thing. Measles itself is not dangerous, but its complications are often beyond our control. With proper nursing, good sanitary surroundings and wise symptomatic treatment there should not be a fatal outcome, but we do know that apparently for no reason, in a carefully guarded case of measles, the chest may become filled with serum or pus several weeks after an apparently favorable termination. We all know that laryngeal stenosis occurring in measles is the most dangerous kind, and those who have had occasion to intubate, I think, will agree with me that we should look on such cases as almost always fatal. I have collected a series of 25 cases of children in whom I have performed intubation for laryngeal stenosis during an attack of measles, and out of this number there were 20 deaths. All of the fatal cases were as carefully treated as any of the successful ones.

The paper of Dr. Koplik is an exceedingly valuable contribution to the literature of the clinical manifestations of rubella. Last winter I was greatly puzzled to find a child with coryza, cough and fever, and an eruption, and in the same family, a few days later, a child without catarrhal symptoms and without these distinctive spots on the buccal mucous membrane, but with an eruption on the head, face and thorax and extremities, and a temperature of 102 F. There were lymphatic enlargements, and on examining the throat I found a slight tonsillitis, with some pharyngitis and uvulitis. The behavior of the second case was entirely different from that of the first one, and I made a diagnosis of rubella. We should note most carefully the distinctions drawn in Dr. Koplik's paper regarding the appearance of the spots found on the buccal mucous membrane in measles and in rubella. I should like to ask Dr. Koplik whether he has noticed as severe catarrhal symptoms, and also whether he has seen the usual complications of pneumonia—chiefly those of a streptococcic nature. In one case of rubella seen by me last winter, there was an exceedingly severe complicating vaginitis, which lasted for several months, and is, in fact, still under treatment. The complication came on very suddenly. I saw the case on the third day, when there was a rash and a temperature of 102 F. On the following day the temperature was normal. The enlargement of the superficial cervical glands, I have noticed in almost every case of rubella. In almost every case of measles associated with severe eruption I see some desquamation, but I have never seen desquamation in rubella. Professor Baginsky lays stress on the whitish coating surrounding the teeth and adjacent gums, and believes this to be almost characteristic as a diagnostic sign. There is a small white film, looking like a mass of epithelium situated at the junction of the teeth and the gum. I have seen that with him time and again, one or two days before the eruption, and have also seen the characteristic spots described by Dr. Koplik.

Dr. Koplik—I never contended that in every case of rötheln one can make the diagnosis; my paper simply shows that rötheln to-day is a definite entity, and that there should be no question about its existence, though Jurgensen and Henoch still doubt it. Concerning Dr. Fischer's question, I would say that in my paper a case is quoted in which the vaginal orifice of a child of 6 years became inflamed. The child was well cared for and in a good family. She complained first of dysuria, but this passed off in twenty-four hours, leaving a vaginitis. My cases of rötheln have been practically free from complications. I isolate all cases, but allow the children to go on the street as soon as the eruption has disappeared; in winter I keep them indoors for about a week. I do not lay any stress on the enlargement of the post-cervical glands; I spoke more especially of the axillary and inguinal glands.

Dr. Schamberg—The mortality statistics of measles that have appeared during the past five years have been astounding to those who formerly looked on measles as a trivial affection. Dr. Griffith has erred somewhat in quoting the statistics of measles in Europe, but the error has been on the side of making the mortality less than it really was. In Paris the average mortality from measles during the past five years has been greater than from diphtheria and scarlet fever combined. In the city of Philadelphia in the past six months the mortality from measles has been larger than from diphtheria or scarlet fever.

I desire to endorse the statement made by Dr. Fischer concerning the malignity of laryngeal stenosis in measles. I have had, through the courtesy of Dr. W. M. Welch, the opportunity of observing the course of six or seven cases within the past few months, and one of them recovered. One still wears an intubation tube, and one, when last seen, was dying from a pneumonia complicating a tracheotomy.

Concerning the whitish film along the gum, referred to by Dr. Fischer, I wish to say that I have repeatedly seen it both in measles and in scarlet fever. It is nothing more than a mass of epithelium which becomes whitish through infiltration with moisture. It is really a desquamation of the epithelium of the gum, and, inasmuch as the rash in the mouth precedes the desquamation on the skin, so does the desquamation in the mouth precede the desquamation on the skin. It can not be considered diagnostic of measles, as it is frequently seen well marked in scarlet fever.

In regard to the various cutaneous lesions that I have referred to in my paper on scarlet fever, it may seem to some that their description is an unnecessary refinement. That may be so; nevertheless Dr. Griffith and others have seen cases of scarlet fever in which the vesicular element of the rash has been so striking as to cause the observer to think at first that the case was not one of scarlet fever. It may, therefore, be of some value to call attention to some of the less conspicuous features of the scarlatina eruption. Cases of scarlet fever frequently occur that are not diagnosed, and on the other hand the diagnosis of scarlatina is often made in the presence of some other toxic rash. I have examined the various superficial lymphatic glands of the body—the postcervical, axillary, maxillary, submental, epitrochlear and the inguinal glands—in 100 cases of scarlatina, and I have found the glandular enlargement constant. In scarlet fever there is a recent enlargement of the inguinal glands in 100 per cent.; of the axillary glands in about 96 per cent., and of the epitrochlear in about 25 per cent. of the cases.

Perineal Prostatectomy.—Rydgier advocates treatment of appropriate cases of hypertrophied prostate through a longitudinal perineal incision. He cited several cases successfully treated in this way in the course of his address at the recent Polish Medical Congress. J. Verhoogen has also recently published a case in which he excised 75 gm. of the hypertrophied gland through a right-angled incision in the perineum. A metal catheter has been inserted in the urethra and perforated the rear wall. Through this opening he pushed out more of the prostate tissue for resection. The elderly patient is completely relieved of all prostatic symptoms. Kudinzeff's experience with resection of the vasa deferentia has been that 9 have been cured, 8 much improved and 7 not benefited. Three of the latter were subsequently cured by epicystotomy.

SOME EXPERIMENTS ON THE RELATION BETWEEN AUDITION AND THE CIRCULATION OF THE BLOOD IN THE HEAD.*

HAMILTON STILLSON, M.D.

SEATTLE, WASH.

A year ago the writer had a period of fortunate misfortune. His left ear had for a time a slight tinnitus with slight lowering of hearing acuity. It enabled him to institute a series of simultaneous experiments on a normal and on an abnormal ear. He thus has been enabled on his own person to confirm or refute statements made by others concerning tinnitus and its allied states and to institute comparison between effects of similar causes in healthy and in unhealthy ears.

This tinnitus, it should be stated, was caused by tubal edema. This is known not only by self-inspection of the pharyngeal orifice of the tubes, but by palpation, so to speak, of the tube by means of the tongue thrust into the post-nasal space. The writer is able to insert the tip of his tongue into the nasopharynx even to the vault of that cavity, and so far as he is aware, he was the first to teach patients to make use of the tongue in cleansing and medicating the mucous membrane of the nasal pharynx in the treatment of postnasal catarrh.

Now, with the tongue thus placed in the nasopharynx, the writer compared the right tube with the left, and found that the superior segment of the left tube was softer and more swollen than that of the right, and posteriorly, where the cartilaginous plate impinges against the salpingopharyngeal fascia, there was a groove, in the bottom of which were a few tender granulations. It was doubtless caused by tubal catarrh.

Politzer states that often in a tinnitus caused by tubal catarrh, brushing the cuticle in the region supplied by the trigeminal will cause the tinnitus to disappear, but in the writer's experience such treatment caused the tinnitus to increase.

Merely fixing the attention on the tinnitus would increase its intensity, and brushing the hairs at the external orifice of the auditory meatus would cause a different tinnitus, which was found to be caused by the contraction of the muscles in that vicinity, especially by the contraction of the salpingopharyngeus of the side experimented on. This tinnitus occurred in the healthy ear in a like experiment.

All the authors call attention to the fact that firm pressure on the mastoid bone, or, indeed, on any of the neighboring bones, will increase the tinnitus, but in the writer's experience it not only increased the tinnitus but raised its pitch, and this increase of tinnitus was greatest when the pressure was exerted against the tip of the left mastoid. Pressure against the right mastoid caused no tinnitus at the time of pressure, but a temporary tinnitus with mental hebetude occurred several times after the pressure against the sound mastoid had been greatly prolonged.

One fact not mentioned by any of the authors with whom the writer is conversant is that pressing against the mastoid lessens the hearing acuity. This is particularly so with reference to high-pitched sounds. Seated before an open wood fire, for instance, where the range of sounds varies from that of the low-toned flap of the flames to the high hiss of escaping vapors from the wood, one can easily repeat the experiment. Pressing firmly against the tip of the mastoid of the normal ear, shuts off the sound of the steam, only the lower-pitched tones being heard. This applies only to the normal ear. And after repeating the experiment a number of times the high-pitched sounds are no longer heard by it for a while and a heavy dulness preceded by subjective noises steals over the hearing. Not so, however, with the tinnitic ear. Pressing against its mastoid tip causes it to hear objective sounds louder and in a slightly higher pitch, and no fullness or dulness follows.

Another experiment easy to perform is testing the hearing while standing or lying down. Any constant sound, like that made by escaping steam, can be approached from a distance until it is first perceived. The distance is marked and the experimenter then recedes and lies down supinely; while in that position he approaches or is caused to approach the source of sound until he again perceives it, keeping the ear directed toward the source of the sound all the while. The hearing distance will be found to have increased. Regaining a standing posture at the distance at which he heard the sound while lying down he will discover that he no longer hears it at that distance. This experiment entirely agrees with Abercrombie's case, cited by Lucas and Politzer—p. 7011—of a man aged 30 years, debilitated by an affection of the stomach, who was deaf while sitting or standing, but who could hear quite well when he was in a horizontal position. Not having access to Abercrombie's original report, the writer is not informed whether Abercrombie's case suffered from tinnitus, but if the latter was the fact, that case does not agree with the writer's experiment on the tinnitic ear. On the contrary, lying down increased the tinnitus and lessened the hearing distance. It is possible, however, and altogether probable, that in cases of congestive tinnitus lying down would increase the hearing distance, especially if the objective noise was similar to the subjective noise. In a case occurring in my own practice recently the hearing distance was greatly increased by lying down. The patient was of robust health, with no disease of the stomach, liver or kidneys, no rheumatism, and no specific infection, and, of course, no anemia. He was a logger, aged 52 years, with otitis media and postnasal catarrh. Both tubes were moderately patent; there was some sclerosis and some atrophy of the membrana tympani, particularly the left one, there being a quadrant fold extending from the short process of the malleus horizontally backward. There was also a crescentic fold in the lower quadrant. Shrapnel's membrane was somewhat congested. The membrana tympani was movable with the otoscope, but the excursions of the malleus were not extensive. There was no tinnitus. There was no fluid observable in the middle ear. Three years previously the patient had had a severe attack of grip followed by a temporary deafness. One year ago he had another attack of grip, followed by what was presumably abscess of the frontal sinus, right and left. The deafness resulting from that attack of grip remained and steadily increased. Hearing distance was about doubled by politzeration. I judge the increase to be as much due to the increased tension placed on the membrana tympani as to the opening of the tubes. The range of hearing was, when sitting: right hears Galton whistle 1; when lying down, .2; left hears Galton whistle, sitting 9, lying down 1.7. The lowest fork he was tested with was a C fork, which he heard

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distinctly, and all tones were neard in pitch about a half-tone higher when sitting up than when lying down, although more feebly when sitting up than when lying down. The increase in hearing produced by reclining supinely was, with the acoumeter, for the right ear from 15 inches to 40 inches; in the left from 15 inches to 70 inches. The hearing was decreased in both ears by a prone position. Weber's test was negative. Rinne's test for C and C^1 negative, for C^2 positive. In the right and in the left the Schwabach test resulted somewhat peculiarly. For C, AC and BC both were 15; for C^1, both 22; for C^2, AC was 40, and BC 18, in the right ear; and in the left ear C was 21 for AC and BC, C^1 18 for AC and BC, and C^2 was 25 for AC and 20 for BC. Tabulating, it was as follows:

	Right.				Left.		
Rinne	—	—	+	Rinne	—	—	+
AC	15	22	40	AC	21	18	25
BC	15	22	18	BC	21	18	20
	C	C^1	C^2		C	C^1	C^2

After one week there was found the following condition: When patient is in prone position the right ear hears the acoumeter at 6 feet, when sitting, 7 feet, when supine, 7 feet. When patient is in prone position the left ear hears the acoumeter at 11 inches, when sitting, 26 inches, when supine, 80 inches.

Schwabach table is as follows:

	Right.				Left.		
Rinne	—	—	+	Rinne	—	—	+
AC	28	15	35	AC	15	20	26
BC	26	20	25	BC	28	20	36
	C	C^1	C^2		C	C^1	C^2

Another experiment showing the relation between audition and the circulation of blood in the head, consists in testing the hearing while suspended head downward. The writer found it sufficient to hang head downward from a table, the thighs flexed on top of the table, the body depending without touching the head to the floor. To press the head against the floor causes confusing tinnitus in both ears. Now, while thus suspended, at first the power of audition in the healthy ear is increased. Presently a slight subjective noise is heard, after which a dulness of hearing follows, accompanied by a cessation of even the subjective noise. With a sufficient number of repetitions of this experiment the phenomena mentioned become less noticeable. One peculiarity needs to be mentioned in passing; just before the objective noise ceases to be heard a slight rhythm of sound is noticeable synchronous with the pulsations of the heart, and this rhythm is noticeable not only in the faint objective sound but also in the subjective sound produced by this passive congestion. The effects of this experiment on the tinnitic ear were somewhat different from those on the sound ear. In the tinnitic ear the hearing power seemed at first slightly diminished and then increased but no rhythm in the objective sound could be noticed.

One more easily performed experiment will complete our list. It consists in moving the head more or less rapidly to and fro, either on the vertical or on its horizontal axis. Oscillating it on its vertical axis for a minute or two causes dizziness, a nausea, a lowering of the hearing acuity, a peculiar bell-like tinnitus in both ears, more noticeable in the tinnitic one. This tinnitus is greatest at the end of the oscillation, and in the sound ear the tinnitus was greatest at the end of the oscillation that turned the right side backward. In the left ear it was greatest at the end of the oscillation that turned the left side forward. Nodding the head violently up and down causes the same phenomena, but to a much less degree, and the tinnitus is not bell-like but rasping in character, as though caused by the rubbing of the bones of the neck and the muscles against their sheaths.

The writer will not attempt to draw any practical conclusion from these simple experiments, nor, indeed, even to explain the causes concerned in the phenomena. They will, however, he feels sure, suggest to aurists many things both of practical and theoretical interest.

DISCUSSION.

DR. JOSEPH H. HOFFMAN, Pittsburg—As the writer has given us some personal experience I will relate a little of mine. I have not made any exact experiments, but I have observed some things rather constantly. I have suffered from tinnitus some fifteen years, and it is continuous. It is not very annoying, but it is always present. My hearing is considerably impaired. I have observed, however, that on lying down I can hear much bettter than when sitting erect. Some years ago I tried my hearing and I have observed generally that when I lie down I can hear things in the house and external to the house that I am entirely oblivious to when I am up, and this is just as true when everything is quiet, before I retire as afterward. I wish to say too that my capillary circulation is not very good.

DR. C. M. COBB, Lynn, Mass.—I think it very often occurs, if not always, that in the beginning of a one-sided tubal catarrh the tone flats for that ear. Men who are musicians will tell you that the tone is practically a half-tone lower on the affected side than on the other.

ETIOLOGY AND PROGNOSIS OF ADENOIDS.*

A. M. CORWIN, M. D.

CHICAGO.

To gather and set in orderly array the different states and conditions that have been observed and recorded as etiologic agents in the production of adenoid hypertrophy is not difficult, for the literature of the subject is extensive and at hand. Age, sex, heredity, scrofula, the lymphatic temperament, frequent colds, nasal deformities, acute infectious fevers, microbes, climate, and social condition are the chief factors that have been named. But after these have been elaborated and analyzed, we are still far from a satisfactory solution of the problem of ultimate causation in many cases. Why does it occur in one child and not in another under similar circumstances, perhaps in the same family. Why does it occur in several members of the same family, otherwise apparently healthy? What is the reason for its frequent congenital occurrence? These and other queries still clamor for solution. In the present instance we have but to read the classic thesis written in 1868 by Wm. Meyer, of Copenhagen, and the writings of Lowenberg, J. O. Roe, Bosworth, Fraenkel, Chatellier, Hooper and others. Numerous writers of the last decade have also enlarged the subject, chiefly from a statistical aspect and by the device of new instruments and special methods of operation. Enlargement of hypertrophy of the lymphoid structure situated in the pharynx as a part of the general lymphatic system is common in childhood. Of 1000 pupils in Copenhagen examined by Meyer, 1 per cent. were so affected. Chappell found adenoids present in 3 per cent. of 2000 New York school children, while Harrison Allen observed the affection in 33 per cent, of 21 apparently healthy Indian girls. The truth as to frequency the world over, probably lies far under the greater of these figures and far exceeds the

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lesser. Up to the age of puberty enlargement of the faucial tonsils is usually accompanied by more or less involvement of the pharyngeal.

It is pre-eminently observed in those between the ages of 3 and 15, and is not uncommon in persons from 15 to 20. It is occasionally seen at birth and often in infants, as exemplified in 6 cases under 6 months of age reported by Huber. Though unusual, it has been found in adults even as old as 65, as in a case reported by Coutoux, and in a woman 70 years old, referred to by J. Solis-Cohen. Roulin, of Marseilles, observed cases in persons 60 and 70 years of age. Lennox Browne removed adenoids from a person of 40 years of age. Bryson Delavan has cited instances in which enlargement of Luschka's tonsil persisted in middle life and others in which hypertrophy had seemingly begun after puberty. I remember in this connection a man of 55 who had had nasal polypi for many years and in whom I found the pharyngeal tonsil of very considerable size and the faucial tonsils but slightly enlarged. Sex seems to bear but little etiological relation to adenoids, though according to some authorities, the males affected seem to outnumber slightly the females under 15 years, after that age the latter appearing to predominate.

In childhood, lymphoid tissue is very abundant in the vault of the pharynx, and this kind of tissue is prone to active inflammation and hypertrophy, as shown by the occurrence at this age of cervical and faucial adenitis, seemingly from slight causes. And owing to the small caliber of the respiratory passages in children, functional interference occurs from glandular enlargements which would be scarcely noticeable in adults. The increase in the dimension of the postnasal and pharyngeal spaces, which takes place rapidly during adolescence, as pointed out by Bosworth, may overcome a marked obstruction produced in childhood by an adenoid mass, should this remain stationary or slightly increase in size. This in part may account for the prevalent opinion that adenoids invariably disappear or rapidly decrease in size at puberty. Up to the age of 20 and 25 these growths are occasionally observed of considerable size, and more frequently of relatively small size. The fact is, however, that in the majority of cases not only does the compensation in the increased size of the cavity take place at puberty but the lymphoid hypertrophy tends to undergo retrograde metamorphosis due to obliteration of blood and lymph channels, and pressure atrophy of the follicles, attending maturative shrinking of the connective tissue, and more or less actual increase of fibrous elements. Kyle speaks of a "natural increase of structure" or hyperplasia of the gland "due to increased blood-supply," and of hypertrophy resulting from inflammation. Increase or enlargement of this lymphatic tissue from one or many causes near or remote is always a morbid condition, the normal structure remaining practically invisible. It simply becomes then a matter of degree of abnormality; on the one hand being remarked clinically by reason of symptoms and requiring operative interference; on the other remaining unnoticed because of the relative smallness of the growth, which finally disappears altogether.

Conditions of general circulation favoring venous turgescence, such as intestinal torpor and other abdominal irregularities or thoracic diseases, are occasional factors in affecting adenoid hypertrophy, but as Kyle points out, occasional evanescent enlargement of these structures from passing congestion or watery infiltration, as a result of reflex or other causes acting transiently, should not be mistaken for true hypertrophy and needs no surgical measures for its correction. Meyer's researches show that these vegetations are common in all climates and affect all peoples and classes, although the Jewish race has appeared to be especially susceptible. A changeable climate, however, exhibiting great humidity and sudden variation from heat or cold, certainly favors their development, no doubt owing to the greater liability to the occurrence of acute catarrhal affection of the upper air-passages. These sudden congestions in turn favor adenoid activity, for the circulation in these tissues is particularly rich in childhood. In warm, dry climates, on the other hand, the disease seems to be less common. Massti remarks that it is rare in Italy in any marked degree. Children in the cities are if anything more markedly affected than those born and reared in the country, very likely because of the dust, smoke and fume-laden atmosphere and bad hygienic conditions favoring lower body resistance and disease.

Several cases of adenoids are often seen in the same family with a history not infrequently of a like trouble in some of the forebears, so that heredity is considered as a prominent element in their causation. In truth there would seem to be back of all other factors some transmitted condition not necessarily the same in every case, and not well understood, as evidenced by such vaguely comprehensive terms in our vocabulary as scrofula, strumous, dyscrasia, lymphatic temperament, diathesis, cachexia and the like. The so-called lymphatic temperament, the diatheses of rheumatism and struma are, so far as the terms are significant, considered predisposing factors. Furthermore, the tubercular and syphilitic dyscrasiæ excite chronic lymphatic glandular enlargement. Harrison Allen calls attention to a group of cases which he calls adenoid disease and suggests that it does not excite to mischief by reason of its influence upon respiration or by the setting up of catarrhal trouble, but that its effects are noted in disturbed general nutrition, and would infer that it belongs to the same class of diseases as myxedema and acromegaly, and advises the study of the relation of the pineal gland and pituitary body to adenoids. Such suggestion might be fruitful of results. But the fact that removal of adenoids and re-establishment of perfect nasal respiration effects marked benefit in even the worst example of mal-development connected with adenoids, strongly suggests that their presence mechanically is the efficient cause. We mention in this connection a hypothesis somewhat ingenious, but lacking in the elements of proof, advanced by Hill, that the adenoid overgrowth is due to the prevention of the normal tonsillar function of leucocyte migration by diapedesis into the pharynx by reason of the thickening and impermeability of the mucous covering of the tonsil induced by contact of irritating contamination of the nasal secretions. Potain considers that the tendency to the involvement of lymphatics in morbid processes seen in childhood is but a normal condition which, carried one step further, gives the true pathologic condition of scrofula; but why this tendency, and what is this "one step further," and what is the reason for it? We are as much in the dark as ever, though furnished with another brilliant combination of words. At all events it is recognized that certain constitutional states carry with them greater liability to mucous-membrane inflammation—catching cold—whether depending on vasomotor disturbance from faulty excretion and autointoxication, or on direct specific action on the mucous membrane of some morbid element, chemic or microbic, reaching the part through circulation. Frequent acute

and prolonged subacute or chronic inflammations or colds are, it would seem, very important actors in this drama of adenoid growth, but they do not explain its presence in all cases, as, for example, its congenital and very early occurrence before the exhibition of inflammatory states. All the causes of so-called catching cold may then be considered active influences at times in the life history of this affection. The presence of nasal hypertrophy, septal spurs and deflections is commonly found in those with enlarged tonsils. They may be occasional causes, and are always aggravators of the trouble in so far as they excite postnasal catarrh, which gives rise to imperfect ventilation and faulty drainage with retention of irritating secretions. Possibly the growth of adenoids is also invited by the increase of congestion of the mucous membrane which may attend rarefaction of air in the postnasal space during deglutition and incident to a faulty method of breathing and the tendency to frequent hawking, when there is nasal stenosis. But these same nasal irregularities can not be considered as invariable causes, because they are also seen in other children without adenoids.

Bacterial agents unquestionably exert marked influence on lymphoid tisue; hence the frequency with which adenoids date from an attack of diphtheria, whooping-cough, measles, scarlet fever, and other exanthemata and from influenza. In these cases it would seem that the disorder is produced by the irritating effect of the specific germs or their toxins or both on the highly impressible lymphoid cells, readily exciting them to proliferation. Of specific germs many have been demonstrated on the surface and within the crypts of the tissues in question, although the results of various observers differ so widely that no definite conclusion can yet be drawn as to the frequency, the mode and the specificity of their operation. A few of these may suffice as examples. According to Lermoyez, 1 in every 17 cases of adenoids is tuberculous. P. McBride with A. Logan Turner found tubercle in 3 per cent. of 100 glands removed and carefully examined, and in the majority of cases numerous micrococci and other bacteria lying on the glands and within their crypts. Pleuder and Fischer, studying statistics of 161 cases in which adenoids were examined for tubercle, found 17 cases of its primary development. Pilliet found 7.5 per cent. of adenoids tuberculous; Dieulafoy by inoculation experiments 20 per cent., by histologic examination 5.7 per cent; G. Gottstein, 12 per cent; Breudel, 12.5 per cent. On the other hand, Goure found no tubercle bacilli in the tissues in the examination of 201 separate specimens of adenoid vegetation, but in many cases staphylococci, streptococci alone, or mixed and associated with other germs.

It is at present uncertain from a bacteriologic and histologic standpoint just what relation bacteria have to adenoid overgrowths, and our chief practical information may be said to have come from the clinical observation that symptomatic disturbances ascribed to adenoids frequently date from an attack of one of the infectious diseases, notably those, however, the bacterial causes of which have not yet been identified.

PROGNOSIS.

When adenoids are of sufficient size to produce distinct symptoms and when they are left unoperated on, more or less serious effects on general health are certain to follow. The stunting of growth with chest deformity, the dulling of intellect, the unfortunate facial aspect of the chronic mouth-breather and the production of various disturbing and dangerous reflex phenomena may be confidently expected in greater or less degree and number, and the general practitioner has come in these latter days to recognize their importance as well as their origin. As to local disturbances, impairment of hearing is a result in a large proportion of cases, 74 per cent. as reported by Meyer. In some instances, the mental dulness referred to is apparent rather than real, owing to defective hearing. Without trespassing on the discussion of symptomatology and diagnosis it is proper to mention in this connection the great liability which exists to otitis media, the occurrence of laryngitis and croup through mouth-breathing, the establishment of nasal and postnasal purulent discharges with danger of involvement of accessory sinuses. It is to be remembered that luxuriant adenoids favor the localization and entrance of various infectious diseases, especially diphtheria. The prognosis, then, from the standpoint of non-interference, is unfavorable.

The question naturally arises, Do all adenoid hypertrophies require removal? Bosworth answers in the affirmative, owing to the liability to active inflammation, because they may be the source of chronic postnasal discharges and because there is no harm done by operation. Most observers, however, would seem to favor the negative. Where no symptoms or signs are apparent other than slight or moderate enlargement of the adenoid tissue and no history of past trouble of serious import, there is no more call for operative interference than in the case of faucial tonsils under like condition of enlargement without evidence of follicular or other diseases or record of former disturbance; or for the removal of the appendix vermiformis of every child. On the other hand, in a child nearing puberty with glands of considerable size, but showing slight or moderate functional disturbance, we should not wait for relief to accompany the probable spontaneous subsidence of the growth with advancing adolescence. Never in any case delay operating where there is the slightest interference with the hearing. Neither can we rely alone on the administration of internal remedies. Their action, to say, the least, is uncertain and slow. The promise of permanent relief through radical and thorough removal of adenoids is good. Recurrence practically never happens. In case of partial removal the inflammation may apparently set up rapid development of the portions of the growth remaining or slower development under the influence of the various subsequent exciting causes, so that in not a few instances there is return of more or less trouble. As a rule, however, there is a gradual atrophy and final disappearance of any remnants. That operation which compasses through removal would seem to commend itself as the better practice.

The possibility expressed by Délie of the transformation of the remnants of adenoids into sarcoma is too remote to admit of serious comment. Lermoyez, judging from two cases in which upon return of the growth it was found on bacteriologic and histologic examination to be undoubtedly tuberculous, would almost infer that in some cases adenoids are but the expression of local tuberculosis and that there is a modicum of danger that general dissemination might follow their removal. This conclusion based on very exceptional experience in the light of actual results of operation is likewise hardly worth a passing notice. Usually the chief local signs of post-operative interference subside within 48 to 72 hours, and in many cases within a few weeks or months the influence upon the general health, physical and mental, is so marked for the better as to seem little short

of a miracle. The relief of simple catarrhal symptoms, postnasal dropping, nasal obstruction from intumescence, which is common in these patients, is usually rapid. The cure, also, of more persistent catarrhal discharges from nose and naso-pharynx may be effected frequently without special measures of after-treatment directed to them, though these are always advisable.

The improvement to hearing when the disturbance has been of short duration, and therefore not incident to organic changes in the inner ear, is often striking and sometimes instantaneous. When there is present chronic purulent otitis, often the benefit alone from removal of adenoids is considerable and is an important measure in the treatment of this affection where so complicated. In many cases it is safer to postpone inflation of the Eustachian tubes until the subsidence of acute inflammation following operation. Prognosis should be guarded where deafness, tinnitus aurium, etc., are results of chronic postnasal obstruction.

Functional defects of articulation, mouth-breathing, snoring, etc., are also commonly corrected spontaneously; though the greater the age of the patient the more fixed the habit, the greater the liability that separate measures shall be demanded for their correction.

As to the dangers from surgical interference, immediate fatal hemorrhage or even serious bleeding is not of frequent occurrence in proportion to the large number of patients operated on, especially if the cases of hemophilia be excluded. In one of the latter reported by Hooper, fatal bleeding followed digital examination. However, in view of the considerable number of fatalities which have been recorded from this source by Knight, Delavan, Newcomb, Hooper and others, every operator must bear in mind this possibility. It has followed injury to the carotid arteries of abnormal course. It has usually been primary, but has also occurred as secondary hemorrhage as long as two days after operation. It seems to bear no special relation to manner of operating or use of anesthetics.

Death from the general anesthetic is among the immediate sources of anxiety, whether the agent be chloroform or bromid of ethyl, the two most recommended. These agents fairly represent the two schools of operators, the one advocating in every case profound narcosis to permit the most thorough removal of the growth, the other preferring the more rapid and perhaps less dangerous method of operating, relying on manual dexterity to remove the major portion of it. Among the other immediate dangers may be mentioned the occurrence of convulsions from shock or hemorrhage, and asphyxia from spasm excited by the passage of blood into the larynx, or occlusion of the glottis by a portion of the gland. Injury to the orifice of the Eustachian tube or extensive stripping off of mucous membrane is certainly to be feared from overzealous or bungling manipulation of instruments.

Secondary or remote unfavorable results of operative interference, in addition to hemorrhage, are bronchitis or pneumonia from aspiration of the blood, etc., into the bronchial tube; accidents which may be avoided by keeping the pharynx lower than the larynx while the patient is under the influence of a general anesthetic like chloroform or ether or by proper manipulation of the patient in case of laughing gas and other anesthetics of transient action. Finally there is some danger of the occurrence of otitis media, erysipelas and deep cellular inflammation followed or not by pyemia or meningitis. Without infringing upon the subject of treatment, it may be remarked from a prognostic point of view that not only are the ordinary measures for surgical cleanliness to be employed against the infection of the wound at the time of operation, but to reduce to a minimum the danger of otitis the use of syringe and douche should be avoided, both in preparing the patient and in after-treatment. It is far wiser to rely on no application, or better to employ bland oleaginous preparations with perhaps the occasional use of a powder containing a small amount of cocain.

Even young children can be quickly taught to keep the nasopharynx relatively clear of secretions during repair by occasional voluntary forced inspirations through the nose with vibration of the soft palate as in snoring. This procedure is especially effective in dislodging secretions if one nostril at a time be closed, the draft of air being confined to the other.

TREATMENT OF LUPUS VULGARIS WITH X-RAYS.

REPORT OF A CASE, WITH CURE.

J. T. KNOX, M.D.

CINCINNATI, OHIO.

The case of lupus which I report as cured by the X-ray treatment first came under my care in May last, being referred to me by Dr. W. L. Taylor, this city, who

Fig. 1.—Before treatment.

had it under treatment at that time. Recognizing his inability to cure the disease by any of the ordinary methods, the X-ray treatment suggested itself to him, but not being equipped with the necessary apparatus, he consulted me. I informed him that I had never treated a case of lupus by this method, and it was with some hesitancy that I assumed charge of the case.

I was very conservative in the beginning of the treatment, but resolved to carefully observe the effect

of each sitting on the patient, until such time as I could decide as to the proper length of time of each exposure, the most desirable distance to place the patient from the tube—in fact to carefully note all phenomena arising during the treatment of the case.

Although effecting a cure in this case, I could not consistently formulate rules that would apply to the treatment of all cases of lupus, from the fact that the effects of the rays vary, according to the idiosyncrasies of different persons. This fact is an important factor in the application of the X-rays for any purpose, and can only be overcome by the most careful experiments on the part of the operator at the beginning of each case.

The subject, Miss C., of Cincinnati, aged 20 years, weighing 125 pounds, of decided phlegmatic temperament, had no tubercular or other transmissible history, as far as I have been able to trace. The family history was negative. The disease was first recognized as being lupus about two years prior to the time I assumed charge of the case. The patient had been treated for disease of the lid margins and occlusion of the tear-duct of the left eye, for some five years previous to that time, which may have been the primary lesion of the lupus, although I do not think it was. During the past two years she has been treated by some

Fig. 2.—After treatment.

of our most capable dermatologists, and was an inmate of St. Mary's Hospital for seven months of the time, under the care of the staff physicians. The disease steadily progressed, never at any time exhibiting symptoms of improvement.

The location of the disease, as will be observed by the accompanying photograph[1] (Fig. 1), involves the nose and upper lip, and had so far progressed as to cause perforation of the nose septum. The photograph, Figure 2, taken since the X-ray treatment, shows almost entire absence of scars, or any condition of the tissues that would indicate that the disease had ever existed.

The treatment consisted of the application of the rays for from six to ten minutes each sitting, every other day, placing the affected parts from 4 to 8 inches from the tube, according to the density of the rays. The whole number of applications made during the treatment was seventy-four, and improvement was apparent very soon after beginning the treatment. The unaffected parts of the face and head were shielded by means of a mask, thus preventing the possibility of producing dermatitis and loss of hair, incident to the use of X-rays.

Although this is the first case of lupus I have treated by this method, I have no hesitancy in stating that I regard it as an infallible one, if properly applied and continued a sufficient length of time.

The only cases heretofore reported cured in the United States by the X-ray treatment, were those by Dr. Philip Mills Jones, of San Francisco, Cal., who reported two cases treated and cured by him during the early part of the year 1899, and which have shown no signs of recurrence.

In closing this paper I can not refrain from adding a word in favor of this wonderful and mysterious force in the light of a therapeutic agent, and it is my opinion that there are possibilities within its range that as yet have not been dreamed of. Its uses in surgery have been fully demonstrated; yet there seems to be an apathy on the part of many members of our profession regarding its use, which, as I can testify, is very discouraging to those of us who are devoting time and money to its development. We should at least expect the support to which we are entitled from the profession, especially in those branches of the work in which we have gained proficiency, which cover a wide field.

1. Taken two years ago by Dr. E. H. Shields, who kindly furnished the plate from which the picture is made. Her condition was much more aggravated when I began treatment.

DISCUSSION.*

DR. W. H. BATES, New York City—The title of the paper is "Secondary Operations on the Capsular Membrane," and I am going to say something that will probably provoke a great deal of criticism. In all the text-books I have examined, secondary cataract is described as being due to a thickening or wrinkling in the posterior capsule of the lens. I have not been able to find any one who has ever seen under the microscope a cataract caused by any thickening or any change in the posterior capsule of the lens alone. But we do find in every case of secondary cataract that I have been able to see in the human subject, a posterior capsule which may be thrown into folds or may be flat, with a layer of connective tissue on its anterior surface. I have specimens in which this layer of connective tissue is fifty times as thick as the posterior capsule itself. This tissue is a fibrous tissue and furthermore contains blood-vessels. Many of these membranes when cut or incised give you a certain amount of hemorrhage from those blood-vessels and in a few instances a clot. I have studied this matter of secondary cataract on animals, rabbits especially, and might talk to you for a long time concerning my investigations. In rabbits I have never seen a case of secondary cataract after removal of the lens caused by a thickening of the capsule itself. It is always due to connective tissue. In the limited number of human eyes I have been able to examine the secondary cataract is caused in the same way.

If you will give me just a moment I would like to give my theory on the formation of secondary cataract after extraction

* Dr. Callan's paper, together with Dr. Knapp's discussion thereof, appeared in the issue of October 13, p. 927.

of the lens, which suggests at the same time a method for its prevention. When the anterior chamber of a rabbit's eye is evacuated and a drop of the aqueous placed on a glass slide you will find at the end of fifteen or thirty minutes no change; after a lapse of five minutes the anterior chamber refills with a second fluid, and if a drop of that be placed on a slide it clots like blood, and if examined with the microscope the clot shows the well-known structure of fibrin. If the rabbit's lens is extracted, then the eye enucleated, at once one finds in the area of the pupil corresponding to the position of the secondary cataract and covering the posterior capsule a layer of fibrin. Two weeks after an extraction this layer of fibrin is partly replaced by new connective tissue. I am positive about this. I have been working over it for four years and have demonstrated it repeatedly to men better versed in pathology than I am.

I have been able to prevent the formation of a secondary cataract in the rabbit on this theory. Instead of allowing the anterior chamber to refill with a fibrin-forming fluid, I fill it with normal salt solution and secondary cataract does not follow. I have applied this principle to human eyes, refilling the anterior chamber with normal salt, or boracic acid solution, and I believe I succeeded when drainage was prevented. Three corneal sutures were necessary in rabbits.

DR. URIBE TRONCOSO, Mexico—The subject of secondary operations on capsular membranes is a very important one. My experience has been much similar to Dr. Callan's. I think for the membrane operation the DeWecker capsule scissors is the best instrument. I have met with some cases of secondary glaucoma after needle operations, and trying to explain to myself the pathology of this accident, I have reviewed the entire literature of this subject. The different opinions advanced are not satisfactory; the most general one is that the traction produced in the ciliary body by the knife leads to increased tension. I do not think this is the probable cause, but that it is due to a wounding of the vitreous body, which, filling the anterior chamber, changes the chemical composition of the aqueous and makes the exosmosis through the Schlemm channel very difficult. For that reason glaucoma is not so liable to occur when, instead of a simple puncture with the knife, which heals rapidly, an incision in the cornea is performed; for instance, when using De Wecker scissors.

This pathogenesis is also applicable to primary glaucoma, and I am now pursuing a series of experimental researches in this direction. My chemical analyses of the aqueous humor in several cases of primary glaucoma have always shown me that the quantity of albumin is considerably increased. This albumin comes probably from the diseased vessels of the ciliary body and retina and its presence in the aqueous, lessening the excretion, leads to hypertonia and its consequent effects.

When the capsule is thin I find that it is only necessary to make a little incision, whether with one or two needles, but when thick it requires the De Wecker scissors to cut the capsule, or the use of forceps for its removal.

DR. JOHN E. WEEKS, New York—I agree with the speakers that one method of operating is not applicable to all cases of secondary cataract. Where the membrane is thin and we have to deal with a wrinkling of the posterior capsule with perhaps some adventitious tissue, the Knapp needle is sufficient to make the necessary incision. As regards the percentage of cases in which it is necessary to operate, I myself operate in at least 90 per cent. of my private cases that are uncomplicated, and in the hospital it reaches about 70 per cent. As regards the time of operation, I have attempted it in one case within ten days after the extraction. I think, however, that from three to six weeks is the proper time to operate. If we operate after three weeks, the condition that Dr. Bates referred to is not present to any great extent, that is, the membranes are not toughened the connective tissue has not had time to become dense.

The operation that Dr. Callan has described, I use very much, but I use the angular broad needle, piercing the capsule at the opposite side to the entrance of the needle, then with the De Wecker scissors I excise a triangular piece of the capsule, removing it with the forceps.

In regard to the formation of secondary cataract, it is true that there is a deposition of connective tissue and that the capsule itself is not much thickened. The capsule of the lens is an epithelial product. When we extract the cataract we have removed the bulk of the lens, but have left more or less cortex which is irritative. In the removal of the cataract we also wound the iris more or less and induce some exudation, if not a hemorrhage. It is well known that fibrinous material coming into contact with the natural aqueous humor produces a coagulum—the phenomena that Dr. Bates has spoken of. The observation of this phenomena is not original with Dr. Bates, but has been known for many years and is familiar to all advanced students of ophthalmology. With the presence of fibrin on the posterior capsule, we have the same process that is found in retinitis proliferans, the presence of a clot that may or may not contain blood-corpuscles; this clot gradually becomes organized and forms a pseudo-membrane. The pseudo-membrane may be extremely thin or quite thick, the density depending largely on the amount of coagulum deposited.

In regard to the use of salt solution or boracic acid solution for preventing the formation of secondary cataract—if they prevent it at all, which I doubt very much—they do so only to a very small extent. I have used them both for a long time in washing out the debris of the lens after cataract extraction. The capsular cataracts are, I think, less dense, because I have removed more of the irritating material, but they still form.

DR. A. W. CALHOUN, Atlanta—Formerly I used to make a simple extraction, but I have gone back to the operation with iridectomy, largely because of the fact that I could not get my patients to come back to me, many of them living at great distances, to submit to the secondary operations. As a result of that operation I do not have so many of the capsular membranes remaining, and when I do have them, their removal is simple. I penetrate the lower portion of the cornea with a very small Graefe cataract knife, and passing it up into the pupil I cut the membrane, at the same time extending the incision down into the iris, making an iridotomy. The iris, of course, pulls apart and helps to keep the membrane apart. My experience with the needle is that when you begin to tear you do not know where you will end, and the pulling is apt to set up inflammation. Occasionally I pass my forceps through and take out a portion of the iris. I also at times use the De Wecker scissors, making the corneal incision with the knife and, passing the blades of the scissors through that opening, make the iridotomy. I should like to confine myself very largely to the simple extraction, because the pupil looks better, but I do not believe it makes any difference in the vision whether you have a round pupil or not.

DR. J. L. THOMPSON, Indianapolis—Do you not sometimes have subsequent hemorrhages after cutting the iris that way, which interferes with the wound?

DR. CALHOUN—I do have a little hemorrhage, but it disappears within twenty-four hours and leaves no bad effects.

DR. WILLIAM THOMSON—Can you always make a sufficient iridotomy with the Graefe knife?

DR. CALHOUN—Yes, sir.

DR. C. F. CLARK, Columbus—There is one instrument that has proved, in my hands, of great value and I think it has some advantage over the De Wecker scissors; it was introduced some years ago by Dr. Noyes. I have had Tiemann make these scissors curved on the flat and they are more easily commanded than the De Wecker scissors. Since traumatism is the main cause of failure in these cases, it has been my aim to simply outline as far back from the edge of pupil as possible as large a space as I can in the capsule and then endeavor to remove the central portion. When the cortex is soft I practice curetting the soft substance of the anterior portion of the lens and removing it by irrigation before attempting the delivery of the nucleus. I think you will find this most valuable in a number of cases. I practice the simple

extraction by preference, as I consider it easier and safer in the majority of cases.

Dr. Miles Standish, Boston—I simply want to add a word for the Noyes scissors. They are very easily used, give greater motility in the anterior chamber, and the handiness with which you can use your fingers is much greater than with the De Wecker scissors.

Dr. Frank Allport, Chicago.—I would like to ask Dr. Knapp what he would do in a case as follows: Numerous attacks of iritis had produced complete occlusion of the pupils of both eyes. Practical blindness resulted. I made an upward iridectomy and found a cataract. In a few weeks, in spite of all efforts, the iritic wound drew together, and the pupil drew up and became obliterated. Later I made a downward iridectomy and extracted the lens. This wound also drew together, leaving a linear cicatricial healing from the upper to the lower portion of the cornea. What would Dr. Knapp advise as the next step?

Dr. Knapp—It is just those cases that I should like to speak of. Dr. Callan has seen me operate on one of this kind. I used the De Wecker scissors and made a triangular pupil. It gradually closed from an inherent tendency to cicatricial contraction. I do not know what to do with them and the only good thing about them is that they are rare.

Dr. S. Lewis Ziegler, Philadelphia—In the beginning of this century there seemed to be two schools, divided just as they are now, one in favor of the knife and the other preferring the scissors. The great fault of the latter is the necessity of opening the eye and the danger of losing fluid vitreous. The limited way in which we can use the scissors is also against them. About eleven years ago I devised an operation for use with the knife-needle. I made the incision in this way: Standing at the head of the patient puncture-incision was made in the periphery of the cornea and the needle passed across the anterior chamber to the left of the median line about 3 mm.; by a quick thrust the membrane was penetrated and by delicate manipulation, without any pressure, the incision was carried by a sawing motion until it came opposite the point of puncture. This made an opening which was oval, and the knife raised through this opening was swung across to a point 4 mm. on the right side of the median line, to allow for about 1 mm. sagging of the membrane. When this latter incision was completed you had a triangular flap. This flap withdrew at once and formed something approaching a triangular opening. Usually the membrane turns directly down behind. If, however, the membrane is very stiff, and it was in these cases, that I was first led to use this method, you can either with the point of the knife press it down and back, or make another puncture in the base of the flap and by a cross incision break its back, so that it will fall down.

Dr. J. L. Thompson, Indianapolis—Are you able to make that sawing motion with a collapsed anterior chamber?

Dr. Ziegler—Yes, but you should preserve the aqueous if possible. The secret lies in making no pressure at all. There is no traction on the ciliary body and therefore only little danger of subsequent glaucoma. I have always used by preference the Hays knife-needle, which is an heirloom from one of the early surgeons of the Wills Hospital. It has the general form and shape of Beer's knife, but on a very small scale. The knife-needle of Dr. Knapp is also quite efficient.

In regard to the opening of the capsule by the cystotome, prior to extracting the lens, I always make an incision resembling the Greek letter pi, the first incision from below upward on the right side, second the left side, and a third connecting these two at the top. This forms a capsular flap that rolls down behind the iris as the lens is extruded, avoiding the gluing together of the anterior and posterior layers of the capsule, and often preventing the formation of secondary capsular cataract.

Dr. Walter B. Johnson, Paterson—One operative procedure has not been mentioned and that is the operation suggested by Dr. Agnew, I think called the hook operation, in which the hook was passed in and turned so as to twist the membrane on the hook, which was then withdrawn with the membrane. This operation has been satisfactory to me, as it was to Dr. Agnew.

Dr. Callan, closing the discussion—There is no question whatever that we can tear an opening by some method, but the whole subject depends on the traumatism we make. My point is this, that in the simple thin membranes we are safe with the knife-needle, but in the thickened membranes no man can tell how much resistance he will meet with. If we could see what the membrane back of the pupil was we would know what to do with it, but we can not. Granted that we can make an opening, no matter by what means, the question of traumatism is the one to be guarded against, and if you have ever lost an eye after the simple operation for secondary cataract perhaps you would feel as strongly about it as I do.

In regard to Dr. Allport's case, I should say that I would have made a section like the ordinary extraction and gone in with scissors to loosen up the iris on each side. I would not attempt to make an extra traumatism by making an iridectomy the whole length of the mass.

BUBONIC PLAGUE IN SAN FRANCISCO.

The following three cases of bubonic plague have occurred in San Francisco since the last report on this subject by The Journal:

Case 16.—Lea Do Hen, aged 50, Mongolian, cigarmaker, had lived in California 28 years. His residence was 710½ Dupont street. Patient died Oct. 5, at 10 p. m.

Examination of the body revealed a large bubo in the right inguino-femoral region. Incision disclosed a lymph node about the size of an egg, surrounding which the tissues were filled with a chocolate-colored fluid. The cut surface of the gland was very dark, purple and mottled, but substance fairly firm. A microscopical examination showed numerous bipolar-staining bacilli, decolorizing by Gram's method. Two guinea-pigs were inoculated with a glandular emulsion on Oct. 7.

One of the pigs lived four and one-half days after inoculation. On examination there was found a large area of coagulation necrosis surrounding the point of inoculation on the anterior abdominal wall. There was widespread edema and hemorrhages into the subcutaneum. The lymph nodes were enormously enlarged in both groins, the mass on each side being about the size of a lima bean. Both lungs were studded with yellowish-white nodules. Each pleural cavity contained about 2 c.c. of pinkish mucilaginous fluid. The liver was greatly enlarged, congested and mottled. Spleen was about fifteen times its normal size, dark and friable, and covered with yellowish specks. The vessels of the mesentery were injected. There was a small amount of pinkish fluid in the peritoneum. The suprarenal capsules and pelves of both kidneys were hemorrhagic. The organs of the animal contained the plague bacillus in great numbers, and it has been obtained in pure cultures from them.

Case 17.—Chun Yen, male, aged 37, Mongolian laborer, had been in California 10 years. Residence was 767 Clay street. Patient died Oct. 10, at 2 a. m. According to the statement of a white physician who lives and practices among the Chinese, he was sick two weeks and died of typhoid pneumonia. The body was that of a very large, fat and well-nourished man, who would probably weigh 200 pounds. An enlargement of the glands of the left femoral region could be detected through the thick layer of fat. These were removed and found to be about the size of hazel-nuts, very dark and necrosed. Smears showed the typical bipolar bacilli in large numbers. Two guinea-pigs were inoculated on Oct. 11, with an emulsion of the glandular tissue, and both lived about three and one-half days.

Autopsy: Guinea-pig No. 1. Large areas of coagulation necrosis surrounding the point of inoculation; marked subcutaneous edema; enlargement of the lymph nodes and hemorrhages in the left groin and axilla; lungs normal; spleen about three times normal size; very dark and soft, but no yellow spots; punctiform hemorrhages in peritoneum covering small intestines.

Guinea-pig No. 2.—Large area of coagulation necrosis at

the point of inoculation, surrounded by a zone of edema and subcutaneous hemorrhage; a marked hemorrhage in the left groin, but no enlargement of the glands; lungs normal; spleen about three times normal size and shows a few yellow spots; same condition of peritoneum as in first pig.

The plague bacillus was recovered in pure culture from both pigs. It is worthy of note that Chun Yen contracted the disease in the same house as the thirteenth case, that of Lee Wing Tong. This house was quarantined and thoroughly fumigated in the interval between the two cases.

CASE 18.—Tai Dong Leong, male, aged 39 years, Mongolian, had lived 25 years in California. Residence was 905 Clay street. Patient died Oct. 14, at 11 p. m.

The diagnosis of this case was established by a clinical examination of the blood during the life of the patient, who was attended by a reputable white physician, who reported the case to the health department as suspicious, as soon as he had seen it.

On Oct. 14, the patient was seen by a number of physicians, among them were Drs. Ryfkogel and Kinyoun, and blood, as well as some fluid from the bubo, were secured for examination. These samples both showed the specific bacillus in large numbers, and it was also secured in pure culture from both sources.

Two guinea-pigs were inoculated, one with the pure culture grown from the blood, and the other with spleen obtained at the autopsy.

The guinea-pig inoculated with the pure culture died in four days of a typical plague infection, there being the usual coagulation necrosis at the site of inoculation; a moderate amount of subcutaneous edema; and an enlarged spleen; the latter however, in this instance, containing much larger numbers of the plague bacillus than usual.

TESTIMONIAL BANQUET TO DR. CHRISTIAN FENGER.

A testimonial banquet was tendered Dr. Christian Fenger, Nov. 3, his sixtieth birthday, at the Auditorium Hotel, Chicago. It was a representative gathering of over five hundred, characterized by good-fellowship and good feeling. The tables were tastefully arrayed with roses, chrysanthemums and other flowers.

After the banquet Dr. Murphy called the assembly to order and said he was proud of the opportunity to pay tribute to Dr. Fenger. As an executive officer, it was his pleasant privilege to tender the compliments of the assemblage. In honoring Dr. Fenger, they accentuated the ideal of the medical profession, for he had been emblematic of all that was pure, noble and truly scientific in medicine in this section for the last quarter of a century. He thanked the honored guests from abroad for being present. He was not unmindful of the many personal sacrifices they had made in leaving their homes and labor to assist in making this testimonial a fitting tribute to this master mind. He then presented Dr. Charles A. L. Reed, of Cincinnati, Ohio, president of THE AMERICAN MEDICAL ASSOCIATION, as the toastmaster of the evening.

Dr. Reed expressed his cordial appreciation of the compliment of being called on to preside over such a large and brilliant gathering. He said they had met not merely for personal gratification, but for the splendid purpose of paying tribute to a man who had won a race by vigor, and not by vaunt. They had assembled to pay respect to a man who by stately stride had ascended a lofty hill, one who by the spirit of truth was made free—Christian Fenger.

Letters and messages of regret were read from the officers of various state, county and local medical societies in the east, west, north and south, the contents of some of them revealing great admiration for Dr. Fenger, others breathing such expressions of gratitude as are rarely written of living men.

Dr. W. W. Keen, of Philadelphia, presented the loving-cup. He said that friendship was one of the things that adorned and sweetened human life the most. Its delights had been pictured by the Roman orator in an immortal essay. It lived in the heathen legend of Damon and Pythias; it reappeared in the Holy Writ, where David and Jonathan were knit as one soul together. It began with youth; it heartened and cheered our manhood, and even in our declining years it illumined the last days with the glories of a setting sun, and after we were gone the memory of our friendships was as the afterglow which perpetuated the glory of a departed friend. He said they had met to bear witness to the value of this friendship and to pay honor to one who was among our foremost fellow citizens, our best-known and our best-loved colleague. He congratulated Dr. Fenger on the wonderful success that he had achieved. He had founded surgery on its true scientific basis, namely, on surgical pathology. Posthumous honors were very good in their way, but there were occasions on which it was proper, while the subject of them lived, that honor should be done to one who had won a conspicuous place in the medical profession not only by his attainments, but by his modesty and his uprightness of character, and that we should in our friendship greet him during his lifetime and shower the honors of the profession on him.

On one side of the cup is inscribed:

"This great, good man for noblest cause displays,
What many labors taught and many days."

On the other side:

"To Dr. Christian Fenger, on the sixtieth anniversary of his birth, from those who know and love him best—THE MEDICAL PROFESSION."

Dr. Fenger, in accepting the loving-cup, said: "What you, dear friends, here present have done for me to-night surpasses anything that I at any time in my life ever dreamed of. It is the milestone in my life, compared to which all other events sink into insignificance. You have certainly passed far beyond any ambition that I ever had, and as to the effect on the remainder of my life, it will of course be that it will make what work yet remains to me pleasant, and when this work is finished, I shall be contented in looking back to your kindness to-night, and shall feel that I, perhaps, have not lived in vain. The chief value of this honor to me is the kindness of heart which inspired the gift. For this token of friendly love I wish to express my heartfelt thanks, not alone to those in whose kind hearts this thought originated, but to those who carried it out, and to all present who joined them and have left their homes, both far and near, to be present here to-night."

Dr. Edwin Ricketts, of Cincinnati, Ohio, responded to the toast, "Physicians as Leaders of Men." He said that the Trojan war could never have been so successfully fought had it not been for the valuable counsel and medical advice of trusted physicians. In the history of the world there were a few men who stood as great landmarks that distinguished the time in which they lived and gave prominence to the age. Some led in conquest; others in the arts of peace. New York has had her Sayre; Kentucky her McDowell; Louisiana her Stone; Ohio her Blackman; Missouri her Hodgen; Pittsburg her Murdock, Virginia her McGuire; Illinois her Parkes; Philadelphia her Agnew; Georgia her Westmoreland; Nashville her Eve, along with thousands of glorious American immortals in our profession, who were leaders of men, and who, "like pillars of fire in a sea of darkness," were the light, the signal, the guide for all time. Fenger is a leader of men; a diligent worker, and a charming companion. For this charitable man, he closed with the following expression: "May life's evening shadows be gentle and restful; may they silently give place to the golden ray of sunshine that shall welcome his glorious morning."

Dr. W. H. Earles, of Milwaukee, Wis., in responding to the toast, "The Physician in Times of Plenty," said the physician of to-day, whether in plenty or in want, was one of the greatest products of modern evolution, and at the same time he was sorry to say too often one of its greatest failures. He was great as a product because of the favorable conditions under

which he had been evolved, and he was great as a failure because in recognizing he ignored the necessities of the time in which he lived. The physician should learn early in life that he had to assume the double responsibilities of citizen and doctor, and his duties to the state were of no less value than his duties as a physician in the community in which he lived. The physician should learn early in life that his reputation to be lasting must not rest on the shifting sands of fleeting popularity, but on the solid rock of integrity, industry, practicability, and worth.

Dr. Joseph M. Mathews, of Louisville, Ky., spoke of "The Physician in Times of Adversity." He said that compared with the great men of the past, with those of the present, or those that are to come, he was willing to express the sentiment that Christian Fenger was as great as any of them. When a young man began to practice medicine he imagined that there were three main objects in view. One was to make money that he might support his family; second, to be a public benefactor, namely, to cure all those who were sick and sought his services; third, to make a reputation. These objects were discussed at length by the speaker. He would that every young man in the profession in America could be present to-night and see in what honest work, honest endeavor could culminate. Fenger did not belong to Chicago or Illinois; he was favorably known for his surgical work in the East, West, North and South. He was a shining example of what could be accomplished by honest, modest, tireless work. He would rather have given to him the tribute that had been paid to Christian Fenger than to wear the crown of a king or scepter of an emperor.

Christian Fenger

Dr. Nicholas Senn, of Chicago, followed Dr. Matthews, responding to the toast, "The Physician as a Scientist." This will be published in a future issue of THE JOURNAL.

At the close of Dr. Senn's remarks he presented Dr. Fenger with an album, beautifuly illustrated and engrossed, which contained the autographs of all present.

Dr. Charles A. Wheaton, of St. Paul, Minn., responded to the toast, "The Physician as a Good Fellow." The speaker had known Fenger for twenty years, and it was he—Fenger—who had taught him most of his surgical pathology. Fenger had made himself peculiarly closely related to the younger members of the profession. He was a charming companion, and a conspicuous example of a great surgeon.

Dr. C. B. Nancrede, of Ann Arbor, Mich., discussed "The Physician in Times of War"; while Dr. William E. Quine, of Chicago, spoke of "The Physician in Times of Peace."

Dr. Fenger spoke of "The Period of Awakening and the Period of Progress." He divided the time since 1877, when he came to Chicago, into two distinct epochs: the first prior to 1880, of which he saw only a few years, and which he called the period of awakening; and, second, the period from 1880 till 1900, which he called the period of uninterrupted progress. During the first period so little interest was manifested by many men in scientific medicine that it was difficult at society meetings to obtain a fair hearing or any discussion when any other than strictly medical matters were brought up. In 1880 there were about 18 medical journals in the middle West; to-day there are 81. In 1880 there were less than 20 medical societies; at present there are nearly 400. The speaker then spoke of the increased number of professors, demonstrators and lecturers in the medical colleges of Chicago. In 1880 there were not more than 25 hospitals in the middle West; the largest of these was the Cook County Hospital, at which time it had a capacity of 250 beds; to-day there are about 150 hospitals, aside from private institutions, with a capacity amounting to more than 14,000. The difficulties physicians had to contend with in America in years gone by were: 1, the little help from the public funds; 2, the low standard of preliminary education, the betterment of which was first urged by Dr. N. S. Davis; 3, the prejudice in the public mind aganst autopsies, even of paupers, and against the use of patients for teaching purposes.

The advantages were the personal energy and willingness to learn—to be thorough, which was the dominant characteristic of the best medical students, whose terms of preliminary study terminated in interneships in hospitals.

It is a satisfaction to the speaker to have done his life work in Chicago, witnessing and taking as best he could a small part in the growth of the West.

Stories were told by Drs. Frank Billings, Archibald Church, S. C. Plummer, Fenton B. Turck, and Harold N. Moyer, which brought out the many good and variable traits of Dr. Fenger.

Dr. G. Frank Lydston, of Chicago, recited in an admirable manner a humorous, but eulogistic, poem, written in Hoosier dialect, on Dr. Fenger. Dr. L. H. Watson, of Chicago, likewise paid a tribute to the distinguished guest by reciting a poem.

Dr. F. E. Lange, of New York City, and Dr. Victor C. Vaughan, of Ann Arbor, Michigan, made brief speeches in which they paid homage to the illustrious guest.

Christian Fenger was born November 3, 1840, in Copenhagen,

Denmark. Following in the footsteps of his uncle, Professor Emil Fenger, he decided to study medicine. While still a student, war broke out between Denmark and Germany, and he served as surgeon throughout that campaign. In 1867 he received his diploma. For two years he was assistant to Wilhelm Mayer, in his ear clinic, and during 1868 and 1869, an interne in the Friedrich's Hospital, Copenhagen. When war was declared between France and Germany, Dr. Fenger became surgeon in the Red Cross ambulance corps and served in that capacity during the war. He then studied in Vienna under Professor Billroth, and returned, in the winter of 1871, to Denmark, and was prosector at the Copenhagen City Hospital from 1871 till 1874. In 1874 he presented and defended a monograph on "Carcinoma of the Stomach, Its Anatomy, Development and Extension," which gained for him the position of lecturer at the University. At the end of 1874, he was made extraordinary professor of pathological anatomy. In 1875 he went to Egypt, was made a member of the Conseil Militaire and surgeon in charge of the Khalifa quarter of Cairo. Two years later he came to America and settled in Chicago. In 1878 he was appointed to the attending staff of Cook County Hospital, and in 1880 was made curator of the Rush Medical College Museum. In 1884 he was elected professor of clinical surgery at the College of Physicians and Surgeons; nine years later he was made professor of clinical surgery at the Chicago Medical College, and in 1899 he was appointed to the same chair in Rush Medical College. During the last twenty-three years he has been or is now surgeon to Cook County, Presbyterian, Mercy, Tabitha Norwegian, Passavant Memorial, Lutheran, German, and German-American Hospitals.

Dr. Fenger has contributed extensively to the literature. Since 1870, more than eighty articles testify to his persistent and careful work. Its scope has been broad. His researches on tuberculosis of bones and joints, abscess and gangrene of the lungs, abscess of the brain, and his more recent work lu surgery of the kidneys, bile-ducts and ureters are among his most important additions to medical literature.

The following were among those present from places outside of Chicago:

ILLINOIS.

Chas. C. Carter, Carl Bernhardi, Geo. L. Eyster and J. R. Hollowbush, Rock Island; Benjamin F. Uran, Charles True, Emmet F. Enos and C. F. Shronts, Kankakee; J. A. Egan, Walter Ryan and G. N. Kreider, Springfield; C. A. Palmer and J. A. Vixtrum, Princeton; C. E. Starrett, J. Forrest Bell and William S. Brown, Elgin; R. L. James, Blue Island; J. F. Barton, Shawneetown; E. F. Burton and Arthur Loewy, Oak Park; F. W. Werner, Joliet; E. R. Miller, Sullivan; W. R. Livingston, Maywood; Carl E. Black, Jacksonville; B. L. Evans and G. B. Browne, Watseka; H. C. Fairbrother, East St. Louis; Frank P. Norbury, Jacksonville; Frank Anthony, Sterling; Clarence A. Earle, Des Plaines; W. S. Pickard, Maywood; W. F. Grinstead, Cairo; W. L. Smith, Streator; C. C. Hunt, Dixon; Edmund W. Weis, Ottawa; J. F. Percy, Galesburg; H. C. Howard, Champaign; W. H. German, Morgan Park; W. A. Brennecke, Aurora; E. B. Montgomery, Quincy; William M. Richards, Joliet; E. J. Brown, Decatur.

WISCONSIN.

O. Thienhaus, Lewis G. Nolte, D. J. Hayes, William E. Durr, L. Boorse, G. D. Ladd, R. G. Sayle, H. H. Hagerman, H. A. Sifton, W. F. Malone, Thos. Fitzgibbon, Jas. A. Bach, G. J. Kaumheimer, Thos. C. Phillips, D. Baldwin Wylie, Chas. H. Lemon, A. J. Burgess, Joseph H. Wallis, S. B. Sperry, Lawrence Hopkinson, F. C. Mock, Byron O. Nobles, Chas. J. Coffey, W. H. Earles, Norman Hoffman, Otto Schorse, Warren B. Hill, W. C. F. Witte, Ralph Chandler, H. F. Kortebein, E. Wells Kellogg, Aug. Doerr, Geo. V. I. Brown, Geo. L. Alexander, John M. Beffel, Louis F. Jermain, H. M. Brown, D. Mereness, A. H. Levings, G. J. Hirth and W. H. Washburn, of Milwaukee; Edward S. Hayes and J. V. R. Lyman, of Eau Claire; W. F. McCabe and F. T. Nye, of Beloit; W. B. Lyman, Mendota; Wm. H. Palmer, Janesville; L. N. Hicks, Burlington; F. S. Wiley, Fond du Lac; D. A. Myers, Prentice; L. H. Prince, Palmyra; Wm. E. Dold, Lake Geneva; Chas. W. Oviatt, Oshkosh; Charles S. Sheldon, Madison.

IOWA.

D. W. Crouse, Waterloo; D. M. Wick, Cedar Falls; D. S. Fairchild, Clinton; C. W. McGavren, Missouri Valley; A. L. Wright, Carroll; Frank T. Breene, Iowa City.

MINNESOTA.

J. B. McGaughey and E. D. Keyes, Winona; C. H. Mayo, Rochester; James H. Dunn, Minneapolis; R. S. Dugan, Eyota; Charles A. Wheaton, St. Paul.

INDIANA.

A. W. Brayton, Joseph Eastman and Guido Bell, Indianapolis; H. C. Sharp, Jeffersonville; I. B. Washburn, Renssalaer; Aldine J. Dooley, Marion; Jas. M. Dinnen, Fort Wayne.

MISSOURI.

Chas. Wood Fassett, O. Beverly Campbell and Jacob Geiger, St. Joseph; Charles G. Chaddock, H. W. Loeb and H. L. Nietert, St. Louis; L. W. Luscher, Kansas City.

NEBRASKA.

Jno. E. Summers, Jr., W. O. Henry, J. P. Lord, A. F. Jonas, Charles C. Allison, Omaha.

NEW YORK.

F. E. Lange, New York.

MARYLAND.

Guy L. Hunner, Baltimore.

MICHIGAN.

Charles B. Nancrede and Victor C. Vaughan, Ann Arbor; Angus McLean, Detroit; Eugene Boise, Grand Rapids.

KENTUCKY.

Dudley S. Reynolds and Joseph M. Mathews, Louisville; J. M. McCormack, Bowling Green.

KANSAS.

J. P. Kaster, Topeka.

OHIO.

Charles A. L. Reed, Edwin Ricketts and B. Merrill Ricketts, Cincinnati.

PENNSYLVANIA.

W. W. Keen, Philadelphia.

MISSISSIPPI.

R. E. Howard, Durant.

Disinfection by Sulphur Dioxid.—In Bulletin No. 3 of the Hygienic Laboratory of the U. S. Marine-Hospital Service, P. A. Surgeon H. D. Geddings makes the following statements and draws the following conclusions as to the efficiency of sulphur dioxid as a germicidal agent, and its employment for disinfecting purposes. After a brief résumé of the chemical and physical properties of the gas, and the various methods of production, he discusses the limitations of the agent, and arrives at the conclusion that it is open to the serious objections of slight penetrating power, and destructive action on textiles and fabrics. He shows however that the infection of the communicable diseases is seldom deep seated, and comes to the conclusion that the destructive effects of the gas are the strongest arguments against its employment. He distinctly recommends therefore that sulphur dioxid should not be employed for the disinfection of textiles and fabrics when it is possible to employ other agents of known efficiency. He shows however that the gas is cheaply and easily produced; that the materials for its production can be procured almost everywhere, and recommends it for the disinfection of ships' holds, freight cars, etc. He lays stress on the importance of accomplishing a hydration of the gas when employed as a disinfecting agent, detailing an experiment in which it is shown that a 10 per cent. volume of the gas failed to exert a germicidal influence not only on a spore-bearing germ, as anthrax, but also on the bacteria of cholera, yellow fever, typhoid fever, diphtheria and bubonic plague, when exposed for forty-eight hours. He then goes on to show that these same organisms, with the exception of anthrax, were killed by an exposure of twenty-four hours to a 0.6 per cent. atmosphere of the gas in the presence of moisture, in other words demonstrates the high germicidal value of hydrated sulphur dioxid or sulphurous acid. Several experiments are then detailed showing the germicidal effect of the gas in various percentages for varying lengths of time, always in the presence of moisture. He arrives at the conclusion that a 5 per cent. atmosphere of sulphurous acid for sixteen hours would be a perfectly efficient germicidal measure as applied to quarantine practice. He further details the amount of sulphur necessary to produce a given percentage of gas in each 1000 cubic feet of space, and a consideration of the quantity of water which must be volatilized during the process of the combustion of the sulphur to effect a hydration of the product. He then closes the article by two practical suggestions as to the position of the sulphur-containers in the holds of ships, and lays stress on the desirability of effecting the combustion of the necessary quantity of sulphur in a number of small containers, rather than in one of large size.

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DR. SENN'S GIFT TO RUSH MEDICAL COLLEGE AND HIGH STANDARDS OF MEDICAL EDUCATION.

Friends of high standards in medicine will rejoice to learn that Dr. N. Senn has given $50,000 to Rush Medical College for building purposes. This is not his first gift to medicine. A few years ago he gave to the Newberry Library, of Chicago, a unique and remarkable collection of medical books—that of Baum and du Bois Reymond. When Rush College became affiliated with the University of Chicago he contributed $25,000 toward wiping out the debt of the college. And only the other day, a gift of $10,000 was announced to St. Joseph's Hospital, in which Dr. Senn for years has done a large share of his private work. This makes a substantial return to the profession in which but few acquire abundance of worldly estate. It is given only to few to further the medical weal as Dr. Senn is doing. The example is one that others will do well to follow, and it is to be hoped that this gift of $50,000 may mark the beginning of a series of endowments in the interests of higher education in medicine.

The foremost medical colleges in Chicago have received, up to this time, far less endowment than similar institutions of relatively the same standing in some other large cities. And large sums of money are necessary in order to build up these schools according to the high standards they have set for their work. Since its affiliation with the University of Chicago, the career of Rush Medical College has been followed with great interest. By the introduction of the quarterly system and of elective methods of study it became a pioneer in revolution of the medical curriculum. An increasing application for admission in view of the increase in requirements on the student both before and after admission would seem to show that the methods are popular and successful. Dr. Senn's gift will enable the college to meet one of the most crying needs at the present time, namely, more room and better facilities for clinical instruction.

The gradual development in various parts of the United States of medical schools with high scientific standards, adequate equipment, and proper methods is a better foretoken than anything else of a great future for medicine in this country. The history of the Johns Hopkins Medical School, of which every American may be proud, demonstrates that American soil is favorable for the growth of scientific medicine and not merely a hotbed for medical commercialism. The influences constantly going out from the medical schools of the large universities in New York, Boston, Philadelphia, Chicago, Ann Arbor, San Francisco, and elsewhere, are powerful factors in the interests of higher medical standards. And there are other well-established institutions with their own hospitals—as in Philadelphia—working toward the same end. But the fact remains, that the present number of medical schools in this country—156 or thereabouts—is excessive and abnormal. And what is abnormal must be subjected to active remedial measures and not, as suggested in a recent presidential address, allowed to drag along until eventually eliminated by a kind of natural selection. One reason for the existence of poor schools is that their graduates as yet have comparatively little difficulty in obtaining the right to practice. The state examinations must be made more searching than now. And the character of the work of schools, graduation from which entitles to come up for state examination, must be accurately controlled. Heretofore such matters have been dealt with in only the most general terms.

The facilities for practical clinical instruction demand careful investigation and specification. Too few medical schools have their own hospitals. This is true of some of our most progressive institutions. A most essential part of the work of the medical school is practical instruction and training in medicine and surgery, and how can this be accomplished properly and in accord with modern pedagogic methods unless the schools have the necessary laboratory and other equipments and also have full and absolute control of adequate hospital facilities? Large endowments are necessary for the establishment of well-equipped institutions and hospitals in which to teach and to study medicine. May not such endowments be expected when it begins to be understood what the good medical school is trying to do? Gifts like Dr. Senn's, therefore, will do much to interest the public in these matters and to open its eyes to the magnitude of the work in hand.

CHRISTIAN FENGER.

The memorable dinner on November 3, at which a loving-cup was presented to Dr. Christian Fenger, was a remarkable and highly interesting event, on a par with the recent ceremonies attending the presentation of testimonial volumes to Dr. A. Jacobi, of New York, and Dr. William H. Welch, of Baltimore. Christian Fenger occupies that same exalted position as these men in the hearts and in the opinion of students, colleagues and the medical profession at large. Former assistants, hospital internes and students of Dr. Fenger for some time felt a desire to bring him some definite token of the high appreciation in which they hold him and his work as a surgeon and a teacher; the idea was taken up officially by the Chicago Medical Society and successfully carried out on a much larger scale than originally contemplated by his most intimate associates.

It speaks volumes for the solidarity of our profession that prominent men in all its branches, from far and near, more or less spontaneously join hands in doing honor in appropriate and dignified manner to acknowledged leaders when suitable occasion presents itself. Dr. Fenger's sixtieth birthday was made the immediate occasion for the jubilant and enthusiastic outpouring last Saturday evening.

Dr. Fenger came to the United States and Chicago nearly twenty-five years ago. Already a trained investigator and pathologist, he brought with him a scientific spirit, which was destined to play an essential part in the development of medical science in the great Northwest. Twenty years ago the conditions for scientific work in Chicago were not so favorable as at the present time. But Fenger set to work bravely, doing the best he could in the circumstances then existing, and in but a short time he had gathered about him a circle of pupils, representing the flower of the student-body of those days. Many of those men are now among our foremost physicians and surgeons, and they date the birth of the inspiration, which has carried them to higher levels, to the day they came under Fenger's influence.

It was by his remarkably thorough and matchless pathologic demonstrations, so full of, at that time, new revelations, that Fenger made his earliest impress on students and physicians. The exhaustive character of his investigations and the acumen and clearness of his analysis are referred to with singular emphasis and delight by those who were fortunate enough to follow his work in the dingy post-mortem room of the Cook County Hospital. In the application of post-mortem observations to practical medicine and surgery he showed the value of pathological anatomy as no one before him had succeeded in doing. New fields for diagnosis and treatment, hitherto unexplored in this part of the country, were made accessible for the practitioner; before long the work of ransacking and revelation was carried into practical diagnosis and surgical treatment, the sphere of his influence rapidly widened, and for years he has been the recognized type of the scientific surgeon and teacher. Modest and simple, free from all trace of mercenary motive, all his work blessed with an altruistic grace, the public honor, shown him in a manner that "passed far beyond any ambition" he ever had, is but well-earned reward.

THE ACTION OF DISEASE TOXINS ON THE LOWER FORMS OF LIFE.

One of the indices of a toxemic condition, or of autointoxication, is the toxicity of the blood, and this has been tested hitherto by its action on the lower animals when injected into their tissues. Klingman[1] points out that a common fresh-water alga, spirogyra, can also be utilized for this purpose, and forms, in fact, a very delicate test for pathologic variations of blood toxicity. Naegeli had shown some years ago that this organism reacted pathologically to the toxic action of infinitesimal amounts of certain substances, such as copper, silver, lead, zinc, and mercury. Klingman and Israel[2] repeated some of his experiments, using mere copper foil immersed in water, and produced cessation of protoplasmic streaming, granulation of the protoplasm, followed by division of the cylinder with nuclear changes, and finally retraction of the outer portion of the tube and destruction of the chlorophyl bands. In a more recent investigation Klingman has found that identical pathologic reactions can be produced by various bacterial toxins and toxic blood-serum. Of one hundred and fifty persons whose blood was subjected to the test, about one-third were in perfect health; the others were suffering from various disorders: epilepsy, neurasthenia, hysteria, insanity, syphilis, tuberculosis, alcoholism, etc. In a number of cases, the toxicity of the blood was first tested on animals, the tests with the spirogyra following. These were made with all precautions against any toxic contaminations, chemical as well as bacterial. About 1 c.c. of blood was obtained and thoroughly mixed with water previously tested and found uncontaminated. A few drops of this mixture were placed on a clean glass slide and examined under a No. 3 Leitz objective. With the blood of fifty healthy persons no reaction was observed, and the inoculation of guinea-pigs also gave negative results. In all the diseased conditions, except those of alcoholism, gout and rheumatism, a division of the protoplasm of the spirogyra occurred. But in the above-named disorders the reaction was somewhat different; the chlorophyl bands were retracted from the protoplasmic cylinder and changed their general arrangement, and the nucleus changed its position and form. In these peculiarities the reaction somewhat resembled that described by Naegeli as caused by chemical action of a very dilute nitrate of silver solution.

The time in which the change will occur varies directly with the amount of toxin present and the species of spirogyra used. In one case it occurred when the blood had been diluted with five liters of water, and in this way it can be determined whether or not the toxicity is increasing or otherwise. Klingman also observed that the time of reaction was greatly prolonged during convalescence, and in one case of diphtheria this was observed after two injections of antitoxin. Another interesting observation was that the blood of patients suffering from functional nervous disorders was quite as effective in producing the reaction as that from those with specific infectious diseases. This indicates an autointoxication in these also and, as he says, is suggestive as regards the treatment of these affections. Experiments were also made on the protozoa to determine the effect of toxic blood on animal tissue, certain forms of the rhizopoda being selected on account of the nudity of the protoplasm; the treatment with toxic blood, in the same manner as with the spirogyra, had the invari-

1 Amer. Jour. Med. Sci., November, 1900.

2 Virchow's Archiv, 1897, cxlvii.

able result of causing their death. With normal blood the effects were negative; there was no change in structure or activity. Control experiments were made by keeping the organisms in the water used, where they flourished without change, while the addition of the toxic blood caused the reaction in from one to twenty minutes, according to the strength of the toxin used.

In concluding his article, Klingman says: "Considering the uniformity with which the reactions in the above experiment occurred, the small amount of toxin required to cause the change, and the easy application of the method, this may be regarded as a delicate, reliable and practical test for toxic states of the blood." What the poisons are that have the effect is not hinted, but the research, aside from its practical applications and importance already mentioned, is very suggestive of future lines of work. The different behavior of blood in rheumatism, gout and alcoholism from that in other disorders suggests that further researches in the different diseases and on the other bodily fluids and secretions, as regards their action on these lower forms of animal and vegetable life, may possibly be fruitful of some results. Other organisms may also be found to throw special light on certain questions; in any case the subject is well worth being followed up in all its aspects bearing on vital reactions, toxins and disease.

PROLIFERATION AND PHAGOCYTOSIS.

Mallory[1] divides the injurious actions of bacterial toxins into cell necrosis, or degeneration, exudation from the blood, cell proliferation, and phagocytosis, this term being used to mean the inclusion and destruction of certain cells by other cells. The last two effects—proliferation and phagocytosis—have come into prominence more recently. As shown by Mallory, the phenomena of proliferation and cellular phagocytes are especially well marked in the lesions of typhoid fever. Similar changes occur, however, in a number of other infections: in the lymph-nodes in diphtheria; in the lungs in acute lobar pneumonia; in the kidney in scarlet fever, diphtheria, pneumococcus, staphylococcus and streptococcus infections; in the meninges and lymph-nodes in some forms of tuberculosis; and Mallory describes a peculiar, nodular cystitis dependent on the accumulation of phagocytic cells in the submucosa in response to the presence of bacilli, morphologically and tinctorially, of the colon-typhoid group. It is especially endothelial cells that proliferate and acquire phagocytic powers under these circumstances. The cells included are polymorphonuclear leucocytes, lymphoid and plasma cells, and red blood-corpuscles. The epithelial cells of the lungs also respond to the action of toxins in a similar manner, and the epithelium of the glomeruli in the kidney may proliferate freely, but it does not become phagocytic. Whether ordinary connective-tissue cells undergo similar changes is somewhat doubtful, but certain observations of Mallory point in the direction that they may. It is especially dilute and weak toxins that have this power. Strong, concentrated toxins cause degeneration and necrosis of cells, and vascular exudation. But the exact mechanisms whereby toxins of certain kinds incite proliferation of cells with phagocytic properties, are as yet wholly unknown.

There are other examples of increased cell-proliferation under the influence of toxic substances in which the new cells are devoid, however, of phagocytic activities with respect to other cells: the polynuclear leucocytosis of some infections, especially the pyogenic, may be mentioned; furthermore, eosinophilia in trichinosis; and the increase of lymphoid and plasma cells in scarlet fever and other diseases is another instance of this sort.

The general tendency of the cells that multiply under these circumstances is to disappear with the disappearance of the agents that called them into existence. This is shown well in the entire resolution of the widely-spread lesions of typhoid fever. At other times the new cells occasion more permanent damage, as in the kidney in the acute interstitial nephritis of Councilman, in which lymphoid and plasma cells migrate from the vessels and accumulate between the tubules, compressing the latter and causing their complete destruction. Proliferation of the glomerular epithelium may also be fraught with serious damage to these important structures.

But phagocytic cells are also capable of doing harm: they may occlude lymphatics; block up capillaries and other vessels, thus causing foci of necrosis in the spleen and liver; by virtue of their phagocytic properties they may destroy useful cells, although the inference is near at hand that the included cells suffer damage before their inclusion, but of this we have no direct evidence. Accustomed as we are to look on phagocytosis as a useful process, the abnormal phagocytosis evidenced by the proliferating cells may seem hard to understand from the teleologic viewpoint, but there are many other ways in which the cell-proliferation here discussed works harm, and there is no essential reason for regarding their phagocytic activity as useful.

1 Journal of Experimental Medicine, 1900, iv. 1.

THE TREATMENT OF THE COMMONER NEUROSES OF CHILDHOOD.

Kauffmann[1] points out that inasmuch as disorders of digestion and faulty diet are often causative factors in the development during childhood of chorea, enuresis, migraine, tetany, bad dreams, nightmare and epilepsy, correction of dietetic errors is one of the main points of treatment. In the majority of cases in which the feeding is at fault it is advisable to cut down the amount of meat. Meat once a day will nearly always be sufficient, and that should be at dinner in the middle of the day while there are still some hours of muscular activity before the child. It is seldom necessary or advisable to remove meat altogether from the dietary. So long as the meat is good, there is not much difference between beef, mutton, rabbit, fowl, game, etc., but fish may with

1 Lancet, July 14, 1900, p. 75.

advantage be substituted for meat. Light puddings and green vegetables may be given, and potatoes in moderation. In severe cases of enuresis it is sometimes advisable to stop meat altogether for a period, and then to allow it again in small quantities. Sufficient mastication and moderate rest after meals should be insisted on, and the child should not leave the house after breakfast until the bowels have been opened. If cathartics are required the saline purgatives are invaluable, at all events to begin the treatment with, and they are best administered as a single dose of sodium sulphate and magnesium sulphate an hour before breakfast, or in smaller dose the last thing at night. Calomel, alone or combined with a small quantity of colocynth and rhubarb, is also extremely valuable. Should an excess of indican in the urine continue, in spite of the treatment outlined, intestinal antiseptics, such as sodium sulphocarbolate, salol, phenol, mercurial salts, charcoal, and possibly arsenic, may be employed. Tonics may be of use when the general health is enfeebled from previous disease. In conjunction with these measures, besides seclusion, darkness and quiet, the most effective treatment of chorea consists in the administration of 15 minims of Fowler's solution twice or three times daily. When the symptoms of poisoning arise, especially nausea and vomiting, the dose should be diminished. Nocturnal enuresis may be successfully treated, as a rule, by the administration of potassium bromid, together with either tincture of belladonna or of hyoscyamus, as a nightly dose. It is, moreover, well to administer some alkali, such as potassium citrate, to diminish the acidity of the urine and its irritating effects. Should bacteriuria be present, its cause should be located and be dealt with. Attacks of migraine dependent on autointoxication may be successfully cut short by the administration of a smart emetic. Antipyrin sometimes succeeds, but by no means always. For the spasm of tetany the bromids are the most efficient remedies when employed together with the proper treatment for the catarrh of the respiratory or intestinal tract. Quiet and darkness are strong aids in the successful treatment of this affection. The bromids are also the best drugs to be employed in the treatment of epilepsy. Equal amounts of the salts of potassium and of ammonium may be given, the total dose to be determined by the result on the seizures. Should intestinal worms appear to be the cause of the disorder, the proper anthelmintic remedies should be administered. For oxyuris vermicularis, infusion of quassia should be prescribed internally, together with mild purgatives. For tapeworm, male fern is the most successful drug if given when the intestines are empty through fasting, and if helped by cathartic remedy. In any case, however, the altered condition of the intestinal mucous membrane will require consideration, and this condition will demand careful dieting and possibly saline purgatives to be continued over a considerable period of time.

ABOLITION OF THE USELESS CORONER'S OFFICE.

The recent carelessness of coroner's officials in Chicago in a widely exploited case of fraud against insurance companies has directed attention again to this "relic of barbarism," the coroner's office. It is being urged strongly that the office be abolished and the work the coroner now pretends to do turned over to the police and the health department. There is no question as to the antiquated and unsatisfactory nature of the inquiries carried on by the coroner's office. The jury system is abused and prostituted, and the entire affairs of the office, both medical and administrative, are handed over completely into the hands of politicians without a trace of training or expertness in medicolegal matters. It is no wonder that justice miscarries under these circumstances; that people have no confidence in the coroner's verdicts, and that stories are afloat of extortion carried on across the bodies of the dead. But the coroner is an elective officer, whose election and whose duties in general are prescribed by state law. On paper his powers are as autocratic as can be conceived. The words of the statute give him power to step in wherever he has reason to believe or suspect that a body lies dead from unnatural or unknown causes. To change the present law so as to provide for a more modern, a more intelligent and a more economic method of inquiry into the nature of the causes of death under these circumstances, would require legislative action and submittal of the proposed change to the people at large—a cumbersome and difficult procedure sure to be met by obstacles of diverse nature. The abuses and shortcomings of the present system are especially felt in the large cities. In the country, where most individuals die peacefully and naturally, the people are not discontented with the coroner and they have no occasion to make close acquaintance with the workings of his office. In a large city like Chicago, however, the present coroner's system has outlived its usefulness long ago. Inasmuch as the essential part of the coroner's work is of a medical nature, namely, the determination of the cause of death in a variety of cases, it follows that physicians are interested, especially in the proper administration of this duty. The medical profession must take an active and leading part in the attempt at securing improvement in the present methods, which are inadequate. Local and state societies should bring up matters of this sort for study and discussion in order that the most serviceable plan may be evolved. This phase of medicocivic affairs certainly merits careful investigation.

THE PERMEABILITY OF THE INTESTINAL WALL TO BACTERIA.

It would be expected a priori that both the cutaneous integument and its visceral analogue, the mucous membrane, are under conditions of health impassable by micro-organisms, and that they thus act as protective coverings against infection. This assumption does not, of course, preclude the possibility of invasion of the ducts of glandular structures opening on the surface, as the sweat-glands, the sebaceous glands, the hair-follicles, etc. It seems probable, however, that a portal for the entrance of bacteria may be afforded by lesions so insignificant as readily to escape detection, and from which the tissues under consideration are scarcely ever wholly free. This would perhaps explain the frequency with which the bacterium coli commune, the most constant parasite of the bowel, is found in the lesions of many abdominal morbid processes. Some experimental observations have been made which go to show that

mechanical obstruction of the bowel will be followed by invasion of the blood and the adjacent viscera, under ordinary conditions principally by the bacterium coli commune, but also by other bacteria that may previously have been injected into the bowel. These results have been confirmed by a number of observers, although their validity has not escaped attack at the hands of others, who attribute the permeability of the intestinal wall to bacteria under the conditions of the experiment to the traumatism inflicted. With the object of controlling his earlier observations in this connection, made in conjunction with Lewin, Posner, in association with Cohn,[1] repeated his experiments, observing special precautions to prevent injury of the bowel, and obtained the same positive results as before, artificial occlusion of the anus being followed in from eighteen to twenty-four hours by infection of the peritoneum, the bladder, the blood, the spleen, the liver, the kidneys, and death sometimes ensuing. Dissemination of the bacteria is believed to take place through the blood-stream. It is not denied that the condition is the result of some change in the mucous membrane, which may, however, not be discoverable even on close scrutiny, and it is thought that in this way infection may arise for which other explanation is wanting.

INTEMPERANCE AMONG WOMEN.

A London gynecologist of reputation, Dr. Heywood Smith, has recently indulged in some public utterances that indicate an unfortunate state of affairs in English society. There is, he says, an epidemic of female drunkenness in the upper classes in England, perhaps we should say the upper middle classes, for he says the evil has not yet reached the aristocracy. Another speaker, apparently a clerical one, claimed that more homes were wrecked in London through drunkenness of wives and mothers than through the excesses of intemperate men. If drunken habits are the fashion abroad there is always a danger that they will be imitated here, at least by a certain limited class, and according to the opinion of some American physicians who have allowed themselves to be interviewed, this danger has to some extent been realized. Among the "smart set," it is said, there is much more drinking than is at all desirable, and the habit seems to be growing. Still, no one claims that the condition is as bad as it is represented to be in England, and the social conditions are such as we hope will prevent it even reaching that point, at least in the same class of society. There always has been a certain amount of private drinking among women, but it may be doubted whether it is much worse now than it has been in the past. The special fraction of society that is likely to indulge in excesses of the kind in this country is probably not a very large one, and there has long been a more pronounced sentiment against female drinking-habits here than seems to exist in Great Britain, if one can judge by the more evident signs. Still, it is well to be forewarned and forearmed against any evil possibilities of the future, as well as prepared to combat any actually existing evil conditions. The ancient Romans in their best estate recognized this fact when they made it punishable with death for women to drink wine. The least, as well as the most, we can do in our days is to make generally known the social, physical and moral penalties that female drunkenness itself will bring, and arouse a public sentiment against it. The more effectively this can be done the better. Intemperance is one of the most serious evils in the male sex; in women it would be even more disastrous.

1 Berlin Klin. Woch., 1900, No. 36, p. 798.

WOODEN PHLEGMONS.

Reclus and others have described a peculiar form of chronic inflammation of the skin and subcutaneous tissue characterized by a slow clinical course and by a wooden consistency, *phlegmon ligneux, Holzphlegmon.* Most frequently involving the neck and developing even for months without fever or pain, they so simulate malignant neoplasm that the termination in recovery may be the first means of reaching a correct diagnosis. In one case described by Reclus death resulted from a suddenly developing edema of the glottis. Various organisms, but especially streptococci and staphylococci, have been found in the exudate. Krause has described an instance involving the hypogastrium. Quite recently Chiari,[1] of Prague, has added still another instance, which is quite remarkable because of the extent of the disease, the long duration, the absence of suppuration, and the final general infection with streptococci. The patient was a woman of 50 years. The inflammation probably originated in a dental periostitis, caused by carious teeth. From this point there gradually developed a chronic, painless, afebrile process marked by much production of new connective tissue. In the course of some five or six months the hard, dense swelling had extended to the neck, the tissues of the chest wall, including the mammæ, and of the mediastinum; the cervical and axillary lymph-glands were also swollen, and the left upper extremity showed some involvement. Death resulted from a bilateral acute pleuritis, caused by streptococci, which were found in various parts of the subcutaneous and mediastinal fibrous tissue, whence the pleuræ probably became infected by way of the lymphatics. Streptococci were also present in the blood. During life two attempts at culture experiments proved negative, indicating, it is thought, a change in the biologic characteristics of the coccus. No cultures were made at the autopsy. The disease is an interesting one, which merits further study before the etiologic relations can be fully understood.

1 Beitr. z. Dermat. u. Syph., Festschrift f. I. Neumann, 1900, 64–76.

TUBERCULOSIS AND MILK.

That tubercle bacilli may be conveyed by milk is generally conceded. Even in the beginning of bovine tuberculosis the milk may be infectious. Bacilli have been demonstrated by animal inoculations in milk of cows giving the tuberculin reaction, but without local lesions. Milk as such is not the only carrier of tubercle bacilli. They are being demonstrated in the various products of milk, such as butter and cheese. Recently Rabinovitch discovered tubercle bacilli in a German patented preparation, made from beef fat and other ingredients, and placed on the market as an artificial butter. They have been found by Morgenroth in margarin. It is suggested by both these investigators that the beef fat used in these

preparations may have contained minute tuberculous lymph-glands. Certainly bovine tuberculosis seems to constitute one of the important problems in the present struggle against human tuberculosis. Bovine tuberculosis, in all its ramifications, should be subjected to the fullest study, regardless of the immediate economic interests that may be compromised by the results, which are sure to be startling wherever such study is pursued. Anything short of extermination of infected cattle and absolute control of the sources of public milk-supply will probably not suffice in the end.

TAXING PHYSICIANS IN VIRGINIA.

As noted elsewhere in THE JOURNAL, the medical profession in Virginia is up in arms against the unrighteous license law of that state. Why physicians should have to submit to such a tax is incomprehensible, according to any rules of justice and decency. The state might as well specially tax clergymen—we are not sure that it does not, for a legislature that would do one thing would not be above doing the other. Any intelligent individual can see that the utility of the average practitioner of medicine to the state is enough to warrant giving him special consideration instead of adding to his burdens, but the Virginia legislators seem to have been too obtuse even for this. If the medical men of the state use the influence they possess, it would seem that the repeal of the law would be a certainty, and if there is the least difficulty it will have to be credited to that invincible quality against which even the gods strive in vain.

Medical News.

CALIFORNIA.

THE PRESIDIO HOSPITAL will soon be full to overflowing. It has a capacity of 880 beds, has now nearly 600 patients and the transport *Meade* is bringing about 275 sick and wounded soldiers.

DR. R. BEVERLY COLE, ex-president of the American Medical Association, San Francisco, was tendered a banquet, October 26, to celebrate the semi-centenary of his entry into the practice of medicine. He was presented with a silver plate suitably engraved with a preamble and resolutions signed by the president and faculty of the University of California.

A SANATORIUM is projected which will utilize the Hotel Mentone property. The Los Angeles physicians interested in the enterprise are William Brill, Charles W. Bryson, Barton Dozier, Paul Bresee, William H. Dukeman, David W. Edelman, Joseph A. LeDoux, H. B. Bascom Montgomery, Claire W. Murphy, Francis A. Seymour, James H. Seymour and Charles F. Taggart.

CONNECTICUT.

NEW APPOINTEES to the staff of the New Britain Hospital are Drs. Joseph B. Brocksieper and Charles A. Gillen.

THE NEW HAVEN MEDICAL SOCIETY has petitioned the New Haven Hospital to rescind the rule which prohibits any physician not a member of the staff from attending a patient in the hospital, even if sent there by him.

YALE MEDICAL SCHOOL, New Haven, began its eighty-eighth year, October 4. Prof. Russell H. Chittenden will be head of the department of physiology in place of Prof. Benjamin Moore, resigned, and Dr. Yandell Henderson will be assistant in the same department.

THE LITCHFIELD COUNTY HOSPITAL at Winsted, which is now almost completed, will have conveyed to it $40,000 by one of the families interested in it. During the life of the donors they will receive a portion of the interest of the fund, but on the death of the devisors, all will go to the hospital.

GEORGIA.

DR. HAROLD L. WARWICK, formerly of Lamar Hospital, Augusta, has located in Savannah.

DR. E. L. OSBORNE has been appointed city physician of Savannah, to fill the place made vacant by the resignation of Dr. M. H. Levi.

THE MEDICAL DEPARTMENT of the University of Georgia, at Augusta, began its 1900-1901 session October 2. Dr. Eugene Foster delivered the opening address.

DR. THOMAS D. LONGINO, councilman of Atlanta, has formulated a plan for organization of the city ward physicians, which necessitates a complete change in the present plans of the health department. Under this plan a health officer will be appointed, to whom the city ward physicians will be subordinate. His duties will not in any way conflict with those of the chief sanitary inspector.

ILLINOIS.

THE CORNER STONE of the new Deaconess' Home and Hospital, Lincoln, was laid, November 4. The building is to cost $25,000.

THE SOUTH CHICAGO HOSPITAL was opened to the public October 26. It has male and female wards, six private rooms, and an operating room, all properly furnished and equipped.

THE BOARD OF HEALTH of Morris has declined to accept the resignation of City Physician H. Milton Ferguson, has promised to support him in his views in future, has eulogized his service during the recent epidemic and has finally succeeded in inducing him to continue in office.

AN INJUNCTION against the new Deaconess' hospital at Peoria has been applied for by a neighbor, on the ground that her "residence is but thirty-five feet from the hospital, and the groans, shrieks and yells of the suffering patients, coupled with the frequent visits of the ambulances and hearse make the hospital an unbearable nuisance."

STATE ORGANIZATION.

THE COMMITTEE of the Illinois State Medical Society, appointed for such purpose, is proposing to present and recommend to the society at its annual meeting next May a plan by which it is hoped a complete organization of the profession may result. While this committee is at work some of the local societies are also active. The District Medical Association of Central Illinois, the Morgan County Medical Society, the Brainard District Medical Society, the Pike County Medical Society, and the Medical Club of Jacksonville, have adopted the following resolutions: Resolved, That it is the opinion of the members of the ———— that the medical societies of the State of Illinois should be reorganized on some comprehensive plan which would constitute the profession a complete and harmonious organization that would include each county, district and state society. That we believe the success which has attended fraternal organizations is, in part at least, due to their plan of organization; and, further, that the time has come when medical societies besides being bodies for the presentation of scientific topics must take a more active and practical interest in the material welfare of the profession as well as an active participation in all measures which are calculated to preserve the good health of the various communities in the state. Therefore, we would respectfully ask our neighboring county and district societies, as well as the state society, to consider some practical plan of reorganization and take steps to carry it into effect.

Chicago.

DR. FRANK T. ANDREWS has filed suit against the Great Northern Theater and Hotel Company for injuries sustained in an elevator accident two years ago. He claims $10,000 damages.

A POLISH HOSPITAL, to cost $250,000, is to be erected by the Sisters of the Holy Family of Nazareth, at the corner of Leavitt and Thomas streets. It will occupy an entire block, will be constructed of cut stone and pressed brick, will be equipped with all modern appliances and will be ready for occupancy in October next.

DR. NICHOLAS SENN'S gift of $50,000 to Rush Medical College, together with $30,000 now in hand, will suffice for the total cost of a clinical building for the college. It will be known as "Nicholas Senn Hall," and will be six stories in height, 40 by 90 feet. It will contain numerous small clinic rooms, a dispensary, laboratory and two amphitheaters.

THE PHYSICIANS' CLUB officially approved of medical inspection in the public schools, at its October 29 meeting, when the following resolution was adopted: Resolved, That it is the judgment of the Physicians' Club of Chicago that the result obtained by the medical inspection of the schools of Chicago demonstrates the high sanitary value of the system. As a life-saving measure it is of the greatest importance to the City of Chicago.

KENTUCKY.

DR. JOHN MASON WILLIAMS, formerly of Louisville, and late of the volunteer service in Cuba and the Philippines, was

Republican candidate for congress at his home, Mount Vernon.

Dr. Joseph B. Marvin, professor of medicine in the medical department of Kentucky University, is temporarily filling the chair of practice in the Louisville Medical College, made vacant by the resignation of Dr. John G. Cecil.

The annual meeting of the medical staff of the Masonic Widows' and Orphans' Home was held October 31, for the purpose of reorganization made necessary by the death of Dr. Preston B. Scott, formerly physician-in-chief. Dr. Ap Morgan Vance was elected president of the staff and Dr. I. N. Bloom, secretary. The following physicians compose the staff: Dr. Ap Morgan Vance, visiting surgeon; Dr. Henry E. Tuley, visiting physician; Drs. John G. Cecil and Frank C. Simpson, consulting physicans; Dr. I. N. Bloom, dermatologist; Dr. William Cheatham, ophthalmologist; Dr. C. Moir, assistant surgeon; Dr. L. Baltzer, assistant ophthalmologist; Dr. Vernon Robins, assistant dermatologist.

LOUISIANA.

New health boards to the number of 25, have been established since the passage of the bill providing for the establishment of parish boards of health.

The school directors of New Orleans have rejected the proposition of the city board of health to inaugurate a system of inspection of school-children for the purpose of detecting communicable diseases.

The State Board of Health adopted resolutions at its recent meeting in New Orleans, providing that fruit vessels with passengers from non-infected ports be detained only long enough to disinfect baggage of passengers, and that vessels, other than fruiters, be required to deliver to the president of the board lists of their passengers with destinations.

MARYLAND.

The Peninsula General Hospital at Salisbury, which will be erected within the next year, will be of brick, well equipped with all modern improvements and will have a capacity of 80 patients.

Typhoid fever prevails to an alarming extent in Elkton, Cecil County. More than 36 cases have been reported to the health department there, and new cases are reported continually. Samples of milk and water have been forwarded to the state authorities for examination.

Baltimore.

Dr. William B. Perry, while riding in Druid Hill Park, October 29, fell from his horse and had his left arm broken and his left shoulder dislocated.

Dr. Flora A. Brewster, charged with violating the state lunacy law by treating an insane patient at her private sanitarium, was acquitted in the criminal court, October 30.

The Rohé Memorial Committee, of which Dr. Louise Erich is chairman, appointed over a year ago to collect funds for a memorial tablet in the hall of the Medical and Chirurgical faculty, has engaged Sculptor Ephraim Keyser, recently returned from Europe, to make a bronze portrait tablet of Dr. Rohé. The funds are now in hand. The committee proposes also to establish in the library a Rohé alcove, consisting mainly of works on hygiene.

MASSACHUSETTS.

A chair of hygiene is to be established at Harvard, $156,000 having been donated for this purpose.

Dr. Elizabeth A. Riley, Boston, has the distinction of being the first woman lecturer in Tufts Medical School.

Practice without registration has caused the arrest of three doctors in Massachusetts, two of whom found bail, but the third was fined $100.

Harvard University has adopted a system of medical inspection which is eminently satisfactory. Dr. Marshall H. Bailey, the medical inspector, sends to each student at the beginning of term a card with the notification that every case of illness must be reported; all janitors are similarly instructed. As a result, Dr. Bailey has a double check on the health of the University.

MISSOURI.

A testimonial to dr. i. n. love.

At the banquet tendered Dr. Love, at St. Louis, on his leaving for New York, referred to in our columns Oct. 27, Dr. Louis E. Newman, chairman of the executive committee of the St. Louis Medical Society, made the following response to the toast, "Our Guest": "We are here to-night to say au revoir to one who has been a wheel horse in the medical ranks for a quarter of a century; one, who, though still in life's meridian, has made for himself an honorable and enviable reputation not only in the community in which he has lived since boyhood and which he now leaves for a wider field of labor, but throughout this broad land. At the century's close he goes to another city, the metropolis of the Western Continent, to follow his professional labors, which I am sure will be crowned with greater success even than in the past. I am sure that you are all with me in wishing him all that he deserves and that from the beginning of his new career until the time comes when his work shall have been done, success will crown his labors. It has been my pleasure and good fortune to know Dr. Love since I began the practice of medicine. My office adjoined his, and he was one of the first to bid we welcome, to extend the hand of fellowship to me. Beginning as his neighbor I frequently met him and loved and honored him for his straightforward honorable bearing, as a gentleman and a physician. Later I became associated with him in committee work of the St. Louis Medical Society, and now when I look back on the pleasant and profitable evenings when with good old, true Guhman, we met and discussed matters social, political and medical, I can not but feel how much I shall miss the genial, entertaining Love. Our loss is New York's gain, and yet let us hope that our friend will always consider St. Louis his home, where we shall always be ready to welcome him, not as the returning prodigal, although we shall always be glad to kill the fatted calf for him, but as a visiting brother who must needs from time to time make a visit to his family."

MONTANA.

As a result of the recent examinations held by the State Board of Medical Examiners, sixteen physicians have been granted certificates to practice.

Free vaccination is announced at Butte and a physician has been employed at a salary of $150 per month to vaccinate all who apply to him. On the first day 47 appeared. The compulsory vaccination ordinance is in force and those who fail to comply with it will be liable to a fine of $5.

An effort is being made to induce Governor Smith to appoint an ad interim or emergency state board of health to act until the legislature can enact the necessary laws. The prevalence and increase of smallpox has rendered the necessity of a central authority and a general plan of campaign for suppressing the disease imperative.

NEBRASKA.

Dr. Luther M. Bowman will open his new hospital in Alliance in a short time. Dr. Vaughan will be associated with him in its management.

Dr. H. Winnett Orr, Lincoln, one of the editors of the *Western Medical Review*, was recently operated on for appendicitis. He was in a serious condition for a time, but is now rapidly recovering.

The hospital at South Omaha is in a fair way to be erected. Various money-making schemes are on foot, one being the sale of lapel-buttons. The promoters expect liberal subscriptions from the corporations and the railroads from whose employees the majority of the patients will come.

NEW YORK.

Dr. John F. Myers, Sodus, has opened his new hospital at that village, with a capacity of 40 beds.

We have received from Dr. Louis F. Bishop, secretary of the New York Academy of Medicine, the following minute: The President and Fellows of the New York Academy of Medicine hereby express their high estimate of the character of the late Dr. Samuel S. Purple, as a citizen and a physician; their earnest appreciation of his valuable services as a Fellow and an officer of the Academy, and their grateful acknowledgement for rare books and pamphlets presented by him in large numbers to the library of which he was the founder. They earnestly desire to extend to the members of his bereaved family their profoundest sympathy in this, the hour of their sad affliction.

OHIO.

Dr. S. A. Hutt, Waverly, suffered a cerebral hemorrhage, October 25.

A memorial laboratory is to be built and endowed by the friends of the late Dr. W. J. Scott, of Cleveland, in his memory.

Dr. Robert H. Timpany, Toledo, has been lying seriously ill with nervous prostration at St. Vincent's Hospital for the past two weeks.

Dr. Chauncey D. Palmer, Cincinnati, has resigned from his position as gynecologist and obstetrician to the city hospital. He will be succeeded by Dr. John M. Withrow.

PENNSYLVANIA.

Francis Schlatter, the "divine healer," while on a recent visit to McKeesport, asked permission of the mayor to permit

him to hold outdoor meetings in the public square to preach divine cure, but was refused.

DR. JOHN EHLER, Lancaster, on October 30, celebrated his eightieth birthday. He has been practicing medicine for fifty-seven years ,and recently attended a meeting of the State Medical Association of Pennsylvania, which he aided in organizing in 1848.

Philadelphia.

THE BOARD OF MANAGERS of the Pennsylvania Hospital have elected Dr. Alfred Stengel visiting surgeon to the hospital, to succeed Dr. Jacob C. DaCosta, deceased.

STATISTICS compiled in the medical department of the University of Pennsylvania show that 71 per cent. of the students have attended a college or university.

PLANS are being perfected for the erection of a new insane asylum. The name of the new institution will be "The Ogontz Hospital for the Insane." Work on the new building will commence early next year. It will cost about $50,000.

A COMMUNICATION from the Women's Sanitary League has been forwarded to the board of health, asking for a further appropriation of $5000 to the Municipal Hospital to build private rooms in the diphtheria pavilion and not less than $10,000 for the construction of a scarlet-fever ward.

AS A RESULT of an inquiry made among the leading druggists, it has been ascertained that quantities of potassium chlorate are stored in many of these houses, some of which have as many as 25 to 100 kegs. A lesson has been learned in the case of the disaster in New York by which many were killed by an explosion probably of this substance. In the latter instance only 30 kegs of potassium chlorate are said to have been carried in stock.

GENERAL.

A WARNING.—A smooth, well-dressed individual has been collecting money and in other ways defrauding the physicians of Detroit and elsewhere, claiming to represent THE JOURNAL and another periodical. His name is B. F. Kenneth. If any of our readers know the whereabouts of this individual they will confer a favor by telegraphing this office. None of our agents are authorized to collect money, and this is specified on all order blanks carried by them.

A FATAL malady said to resemble typhoid fever complicated by pneumonia now prevails over the valley of the Yukon region; 150 Indians have already died.

THE LADIES of Sitka, Alaska, and others interested in the maternity hospital in the native village, met on October 1 to devise means for the supervision and maintenance of the charity.

COMMANDER SEATON SCHROEDER, governor of the Island of Guam, has issued an order opening all hospitals in the island to the civilian patients free. The health of the island is fairly good. There are no typhoid cases and only a few of intestinal troubles.

MRS. LELAND STANFORD, of California, is said to be negotiating for the purchase of certain buildings now used at the Paris Exposition. These are to be taken down and the material used for the erection of an American hospital in the suburbs of Paris.

EDMUND DANTES, while at work in a drug store in Paterson, N. J., stole the diploma of his employer, John Hall, and substituted his own name. He then went to New York City and obtained a position in a drug store on Second Avenue. He was arrested, and October 31 was sentenced to one year's imprisonment in Sing Sing.

SPIRITUAL MEDICINE.—The "spiritualists" held an annual convention in Cleveland, October 16 to 20. They adopted numberless resolutions, two of which are of some little interest to our profession. They are as follows: "Resolved, That while we are opposed to the existing medical laws, and to all efforts being made to enact so-called medical laws, we would advise all who attempt to treat the sick to become thoroughly acquainted with anatomy, physiology, hygiene, and the general laws of health. Resolved, That compulsory vaccination is not only unwise, unconstitutional, and un-American, but dangerous to health, causing eczema, erysipelas, cancer, tumors, syphilis and often death." It is certainly very kind of them, while declaring their opposition to all medical laws, to advise all those who attempt to heal the sick to become thoroughly acquainted "with anatomy, physiology, hygiene, and the general laws of health." A spiritualist then, not having studied surgery, would probably treat a broken leg by means of "the general laws of health." The second resolution that is quoted above is most startling, or as the newspapers say, it is "important if true." The ills, which we are there told follow in the wake of vaccination, are quite calculated to scare away "spirits" of ordinary caliber, but as all persons whose mental processes are governed by common sense know the statement to be plainly untrue it is not likely that this resolution will cause much of a stir in this world of hard facts.

CANADA.

OUR LEADING medical societies are now contemplating the publication of their annual transactions in full for the first time, thus giving the members thereof something more tangible than a mere annual membership certificate. It is likewise thought that those members will contribute more cheerfully to a medical defense fund.

AT THE PRESENT time there is more diphtheria in the city of Toronto than in other cities and towns in the province of Ontario; in fact, in some of the northern districts of the city it has almost approached to the status of an epidemic. The records for the present year so far indicate that the number of cases will be more than the average.

ADVERTISING NOXIOUS DRUGS IN THE LAY PRESS.

The death in Toronto this past week of a married woman, in convulsions, brought about through having taken an advertised drug to procure miscarriage; and the recommendation of a coroner's jury that the advertisements of these self-same drugs be listed as an offense against the criminal code, has been the text of a scathing article appearing in a society paper, against the leading daily and weekly papers of the country who profit by the insertion of these obnoxious and dangerous advertisements in their columns. That the lay press are great sinners in this respect has been before pointed out in these columns. It may prove an enlightenment to the public that newspapers are doing nothing more than lending themselves and their columns to criminals first and their victims last. The daily press is reeking with these filthy advertisements, and that of Toronto is indeed a sinner in a great degree.

NOVA SCOTIA BRANCH BRITISH MEDICAL ASSOCIATION.

The annual meeting of this branch of the British Medical Association was held at Halifax October 17. President Dr. E. A. Kirkpatrick, in the chair. The efforts of the association in the direction of securing legislation re tuberculosis have proved successful, as the government of Nova Scotia has provided through special legislation, for the construction and maintenance of a sanatorium. Five new members were elected to the branch during the past year. The election of officers resulted as follows: President, Dr. G. C. Jones; vice-president, Dr. Thomas Walsh; treasurer, Dr. M. A. B. Smith; secretary, Dr. C. D. Murray; council, Drs. Ross, Kirkpatrick, Murphy, Walsh, Trenaman, Major Peeke and Dr. G. M. Campbell. Representatives on General Council, Surgeon-General O'Dwyer.

TORONTO UNIVERSITY FORGING AHEAD.

For many years it has been thought that McGill was supreme as regards educational matters in Canada; but for the past few years there have not been lacking signs that her rival in the West is now outstripping her in the race. As has been pointed out in these columns, the number of students enrolled in the department of medicine has been gradually increasing year by year until this year Toronto has enrolled no less than 110 freshmen. In the department of applied science, where McGill used to be ranked as the first, Toronto is making marked strides as evidenced by the large increase in the past few years in the numbers of her students. In the arts course, Toronto has always been supreme; and evidently in the departments of medicine and applied science McGill must look to her laurels or Toronto if it has not already done so, will snatch them from her brow. When Trinity and Toronto become consolidated into one institution, with their seven hundred students in medicine, Toronto will be the great university of Canada.

FOREIGN.

THE authorities at Paris have confiscated the issue for August 26 of the *Journal de Médecine de Paris* and certain back numbers during the year, on account of articles "outraging morality."

IN SWITZERLAND the new regulations make medical examinations much stricter than heretofore, and the minimum period of study is prolonged to five years.

THE DEATH of Dr. L. Villar is reported from Lima, Peru, professor of anatomy and legal medicine, president of the Academia de Medicina, editor of the *Gaceta Medica*, and senator.

THE MEDICO-SURGICAL SOCIETY of Sao Paulo, Brazil, is organizing a medical college at that place on a large scale, planning for eighteen chairs and fourteen clinical professorships.

THE NEW hospital for the Vienna Allgemeine Poliklinik has been completed. It has rooms for isolation and living apartments for a physician on each floor.

Dr. Robert Tigerstedt, of Stockholm, has returned to his native land, in response to a call to the chair of physiology at Helsingfors.

Dr. Javal, the eminent director of the Sorbonne Ophthalmological Laboratory, Paris, has been made officer of the French Legion of Honor. He has become completely blind, although only 60 years old.

October 13 was observed in London as Hospital Saturday, for the twenty-seventh successive year, and special collections were made in many thousands of business houses and workshops on behalf of the hospitals and dispensaries.

A schedule of precautionary measures against the spread of plague, with special reference to railways and travelers, has been drawn up by the German Imperial Board of Health.

It is announced that the Copenhagen Academy of Medicine has proposed Professor Finsen as a competitor for the Nobel prize in medicine. Our exchanges state that this prize of 200,000 marks, or about $48,000, is to be an annual institution.

The *Semana Medica*, of Buenos Ayres, has inaugurated the protest against lodge practice in the Argentine Republic, which it seems is assuming large proportions.

A tape-worm charlatan has been imprisoned at Munich, owing to the death of a five-months infant to whom he administered a large dose of extract of male fern. The child died in less than an hour.

Prof. Siegenbeek van Heukelom and his pupils recently published a large work, the "Recueil de Travaux Anatomo-Pathologiques du Laboratoire de Boerhaave," which has attracted much attention. The death of the promising scientist in his fiftieth year is now announced from Leyden. Dr. H. Abegg, one of the leaders of the profession in Danzig, died recently at Wiesbaden.

Belgium has lost in Dr. E. Janssens one of the pioneers in hygiene and public health statistics. It is chiefly to his efforts thaat Brussels has taken such a high stand in hygiene and sanitation. Every physician in Belgium received from him a wekly bulletin containing the vital statistics of all the principal cities in the world. The death of Dr. A. P. Ferrari is also reported from Buenos Ayres, and of Dr. R. Hirsch from Hanover.

Not one of the 104 persons connected with the Italian railroads who have submitted to prophylactic measures against mosquito infection of malaria, has contracted the disease during the entire season. On the other hand only 7 or 8 out of 359 persons in similar conditions, whose houses were not screened, have escaped malarial infection. The screens allowed the passage of the culex pipiens and kept out merely the anopheles.

The Berlin University has opened two official courses not before included in the curriculum. One is for "Heilgymnastik," in charge of Dr. G. Schuetz, and the other is for massage, to be given by Prof. J. Zabludowsky at the new university Institute—six months for students, and a one-month's post-graduate course.

PROPHYLAXIS AGAINST THE PLAGUE.

Yersin has been interviewed by the correspondent of the *British Medical Journal* in regard to the prophylaxis of the plague. He states that the only effective measure to stamp out the plague is to evacuate the houses and not return to them for six months. Disinfection and even burning down the buildings are ineffectual. By evacuating a village or small community the disease will die out in a week, and by this means he has succeeded in breaking up many epidemics. The ideal plan would be to have two villages, one for the cold weather and one for the summer. In Europe where such measures are impracticable, the chief reliance must be antiplague serum and inoculations, with as thorough disinfection as possible.

THE ORGANIZED EFFORT IN GERMANY.

Krecke endorses the new German society to protect the material interests of members of the profession in their struggle with the *Krankenkassen* or sick-benefit associations. He urges the necessity of an immediate fund for a "defense fund," and suggests that those physicians able to do so will buy a life membership in the society, paying 500 marks at once and for all, instead of the proposed mark a week. He will head the list. He also urges the appointment of reliable officers for the society, who will be able to devote their whole time to it if necessary, and plan to influence the lay press in favor of the medical corps. He concludes his communication in the *Muench. Med. Woch.* of October 16, with the plea that the social interests of physicians should have some attention paid to them in the medical curriculum. Students should be trained to take an interest in general matters affecting the profession as a whole, and no one should be qualified to lecture until he has spent at least a year in active practice.

PROPHYLAXIS AGAINST TUBERCULOSIS IN NORWAY.

Claus Hansen and Holmboe have drawn up a bill for the state prophylaxis of tuberculosis, which has been adopted by the legislature of Norway and will become a law January 1, 1901. It requires the physician to report all cases of affections of a tuberculous character whenever accompanied by secretions liable to propagate the disease. The attending physician is held responsible for the supervision of the execution of thorough prophylactic measures. If necessary he can call on the local board of health for aid. This board is empowered to send the patient to a hospital or sanatorium if it deems that appropriate hygienic measures are not being enforced. It can also exclude persons known to be affected with tuberculosis from having anything to do with the preparation of food for sale, also with the sale of articles for food, or employment in the dairy business, or as children's nurses. The government is authorized to take the measures considered necessary to prevent the spread of the disease in much-frequented places, hotels, theaters, etc. The traveling expenses necessitated by the application of the law will be borne by the state, but the hospitalization of the poor and disinfection of their dwellings must be paid for by the community. The *Progrès Médical* of October 20 agrees with Vallin that the notification of tuberculosis should not be compulsory, but left to the discretion of the attending physician until the day when the public is trained from childhood to sound and judicious conceptions of contagious diseases and their prophylaxis.

CO-EDUCATION IN AUSTRIA.

The new regulations whereby women are admitted as ordinary students to the universities and colleges in Austria, according to the *British Medical Journal*, have already been the cause of some disturbance of academic calm. Prof. Hermann Nothnagel, who holds the chair of special pathology, therapeutics and clinical medicine, in the University of Vienna, when he found a row of young ladies on the front bench of his class-room, refused to proceed with his lecture on the ground that it had not been prepared for students of the feminine persuasion. The girl undergraduates were then requested to depart, which they declined to do, and as the chronicler relates, they had to be led out of the University, but whether from its rooms merely or from its precincts he does not state. At Graz, too, the lady medical students were ungallantly received by their fraternal colleagues on making their first appearance in the medical class-room. On this occasion the girl undergraduates took up a less firm attitude than their Vienna sisters, and left the room with sobs.

LONDON LETTER.

THE PLAGUE IN GLASGOW.

Thanks to the energetic precautions of the authorities, the outbreak of plague in Glasgow has been completely arrested. There are now only 14 cases in hospital and 6 patients have been dismissed cured. Prof. Zabolotny, of the Imperial Institute of Experimental Medicine, St. Petersburg, who has spent several weeks in Glasgow on behalf of his government, has made an important report on the outbreak. His conclusions are as follows: 1. The outbreak, when compared with that of India, China and Africa, with those of Europe of recent years, is of the mildest description. 2. The extension of the epidemic is not great and the mortality insignificant, which may be attributed to the energetic sanitary measures. 3. For the most part the cases are bubonic, which are less dangerous than the pneumonic. The latter are excessively contagious because the sputum teems with plague bacilli. 4. As in the bubonic form the disease spreads only by contact with the skin, isolation and cleansing of linen and clothing are most important. 5. For persons in contact with the sick the best protection is an injection of the serum, 10 to 20 c.c., as here practised. 6. The treatment of patients is most effective when the serum is injected intravenously in large doses, 60 to 120 c.c.

THE FATAL CASE OF PLAGUE AT CARDIFF.

It is now beyond doubt that a fatal case of plague has occurred at Cardiff. The subject was a sailor on board a steamer, which came from Rosario in the River Platte to South Shields on the Tyne. When he landed he felt unwell and proceeded by train to Newcastle and thence to his home in Cardiff, which he reached on September 27. The physician who first saw him diagnosed typhoid fever. But he became suspicious and communicated with the medical officer of health. Plague was feared, and samples of the blood and the serum from an inguinal bubo were sent to the bacteriological laboratory. The bacteriological examination showed that the patient was suffer-

ing from plague. He died on October 4. Most elaborate precautions were taken against the spread of the disease. The patient's clothes and the bedding at his house were burned. His body was cremated. Over 700 rats have been destroyed at Cardiff, of which 134 were caught on one ship. All danger of an outbreak of plague seems to be now passed.

FRACTURED SKULL MISTAKEN FOR DRUNKENNESS.

Another of those unfortunate cases in which a fatal head injury is regarded by the police as a case of drunkenness, has just occurred. A Londoner, aged 54, was traveling on business at some neighboring seaside resort. He did not return home until later than when he was expected. On his arrival he complained of his head and seemed in a dazed condition. He said that he had been locked up, charged with drunkenness and fined. He was a man of sober habits, and really had been taken ill and fallen while running to catch a train. Three days later he died. At the inquest it was proved than on the day of his arrest he was sober at 1:45 p. m. A policeman said that about 2 p. m. he saw the deceased staggering toward the railway station. He fell three times. A physician was called, who expressed the opinion that he was drunk, and he was taken to the police station. The police inspector insisted that he must have been drunk, as he could not stand. He admitted that blood was oozing from one ear. Death was found to be due to fracture of the skull, and it was thought that the deceased had an apoplectic seizure before he fell.

THE HOSPITALS COMMISSION.

At Cape Town the commission received evidence of the good management of the Rondebosch Hospital at Sterkstrom, but at the Maitland Hospital the patients suffered considerable neglect and three were said to have died in consequence. One of the hospital ships was described as filthy, and the milk and food supply as bad. The civil surgeon at the Tuli Hospital complained that the authorities would do nothing. Horses were allowed to die and rot near the tents, and it was impossible to procure the necessary medicine. Three patients, including one Boer prisoner, died in consequence. The food supplied was unsuitable. At Simons Town the commission concluded taking evidence. The treatment of the Boer sick was found to be most satisfactory. The commission left for England on October 10, where further evidence will be taken.

Correspondence.

Druggists and Prescriptions.

October 31, 1900.

To the Editor:—A patient applied to me recently with gonorrhea, for whom I prescribed methylene blue in a formula taken from THE JOURNAL of June 2, 1900. Of late years it has been my custom to supply these cases with medicine, otherwise I see them no more. Having seen an advertisement of a Philadelphia pharmaceutical house, offering capsules *to the profession*, made up, practically of the same formula which appeared in THE JOURNAL, but with a less amount of ol. santal and oil of cinnamon instead of oil of nutmeg, with the addition of one drop of copaiba in each capsule, I wrote to the firm explaining how I prescribed for above patient and I probably would not see him again, as he would most likely have the prescription refilled and supply himself and friends, which conjecture I found correct. I asked the firm whether they could supply me with capsules containing the ingredients in any proportion desired—I have no faith in the minute doses of ol. santal and ol. copaibæ, and ascribe the whole benefit to the methylene blue. The firm referred to sent me a sample of the capsule, and their price list and in a letter received subsequently they evaded my latter request and instead suggested that *I should have my druggist* keep a small stock on hand to *meet my prescription demand*. This very thing I especially told them I wished to avoid. The fact is that I have been almost driven out of practice by the refilling of prescriptions. The practice of physicians in this section has almost been destroyed. My wife overheard one woman telling another in the street that there could be no better doctor than I, but that I always gave prescriptions and that their druggist bills amounted to more than the doctor's; she did not grudge the latter his fee but was robbed by the druggist. A physician who had been trained in a "surgery" in England, in which they dispensed their own medicines, as an unqualified assistant I presume, settled here a few years ago, and by supplying his medicine drew patients from the other physicians. I feel that I can employ my time more usefully than in the mechanical occupation of putting up drugs and have consequently gone to the wall.

The manufacturing pharmacists to whom I wrote graciously condescended to inform me of the modus operandi of some of the ingredients of their capsules. Is it come to this that a trading firm dares presume to instruct us in therapeutics. No wonder they grow fat while we starve. It has been my practice to write prescriptions. The druggists we had here formerly, when asked to prescribe, referred the person to a physician. Those we have now charge exorbitant prices for prescriptions and tell them they have *something better*, and even dress wounds. One druggist, I am told, goes from house to house recommending Blaud's pills at so much a dozen. Another put up one of my prescriptions in fancy bottles, tagged on his own name and peddled it around the country in a gorgeous wagon. A druggist in a neighboring town got one of my prescriptions which my druggist put up in powders as prescribed at 75 cents, made them up in quantity and sold them to all comers at 25 cents a dozen. From the operation of which causes I subscribe myself, SLAIN VICTIM.

The Hall of Fame and the Discoverer of Modern Anesthesia.

HARTFORD, CONN., Oct. 30, 1900.

To the Editor:—In your brief editorial in the issue of October 27, on "Physicians and the Hall of Fame," you say it has been suggested that an expression of opinion through THE AMERICAN MEDICAL ASSOCIATION might have some influence and weight even with the laymen of the jury of award.

You say the suggestion is practical and worthy of consideration. With an ordinary jury this is probably true, but the present jury ranks as an extraordinary one, and the outlook for recognition by them of a physician or surgeon seems almost hopeless. Chancellor MacCracken, of the New York University, who appears to have had something to do with the selection of the judges, is reported in the New York *Sunday Herald* of October 14, under the heading "Prejudice of Class and Pride of Locality Influenced the Votes of the Judges," as follows: "The failure of any physician or surgeon to qualify is to me far more interesting, and again it is the chief justices' light vote that caused it. They must all be in pretty good health, I think, and remember the dentist only when their teeth ache. It is extraordinary though that a large class of men regard physicians merely as a necessity."

There are few probably that will care to disagree with the Chancellor in his estimate of the judges, for he says: "The whole matter has been absorbingly interesting and I am finding new things in it all the time." Chicago's distinguished and well-known physician, Dr. N. S. Davis, will remember the action taken by THE AMERICAN MEDICAL ASSOCIATION at its regular session in Washington, D. C., in May, 1870, the New York Medical Society in 1860, the American Dental Association in 1864, the Connecticut Medical and State Dental Association, the Gynecological Society of Boston, Oct. 20, 1870, and other societies of the country in giving expression of their belief from accurate knowledge of facts regarding the discovery of anesthesia, Dec. 11, 1844, by Dr. Horace Wells, of Hartfrd, Conn.

Dr. Henry P. Stearns, for the Connecticut State and Hartford County Medical Societies, and Dr. James McManus, for the Connecticut State and Hartford City Dental Societies, had circulars printed giving evidence which was sent to the judges early enough for them to give to the subject careful, judicial consideration. It has been given out that only twelve of the judges voted for Dr. Wells. It would look as though the others either "willfully or even ignorantly" failed to recognize or appreciate the one great event of the century, when they spurned the name of the American who, as Lecky in his "History of European Morals," said, "has done more for the real happiness of mankind than all the philosophers from Socrates to Mill." JAMES MCMANUS, D.D.S.

American Diplomas in Australia.

SYDNEY, AUSTRALIA, Oct. 4, 1900.

To the Editor:—I enclose a clipping from one of our daily papers; such clippings and those who come out with diplomas from such schools (?) give our country rather a poor name here. The Medical Board of Queensland declines to register American diplomas unless certified to by an examination in Sydney or Melbourne University, and gives as reason of such requirements, that there is great uncertainty as to the value of an American diploma and great difficulty in obtaining reliable information from the United States.

Again I would wish that THE JOURNAL was in exchange with the *Australasian Medical Gazette*, the journal of the Colonial Branch of the British Medical Association.

Yours truly, P. M. K., Jefferson Med. College.

The following clipping accompanied the above, and is taken from the Sidney (Australia) *Telegraph* of October 3:

VALUE OF AN AMERICAN DEGREE.—The University of Delaware, which has recently been offering the degree of doctor of philosophy to all and sundry in Europe and the United States, would seem to be a decidedly curious institution, judging by its incorporators. They are a dentist, a saloon keeper or publican, and the wife of a carpenter. It is said that the University has no office or recognized home, but under its charter, which is perpetual and enables it to operate in any part of the world, the so-called University can teach dentistry, surgery and the science of philosophy, and can confer degrees of these as well as honorary degrees. What the worth of the degree is can not be stated, except in dollars.

Adirondack Cottage Sanitarium.

SARANAC LAKE, N. Y., Oct. 25, 1900.

To the Editor:—I notice an article in your issue of Oct. 20, 1900, by Dr. E. S. Oliver, who was for three months connected with the Adirondack Cottage Sanitarium, but who has no connection whatever with the institution at present. I would like to state that the article in question was written entirely wihout my knowledge, and I hope it is unnecessary to say that many features of it have not my approval. Yours truly,

E. L. TRUDEAU, M.D.

Physicians and the Hall of Fame.

CHARLESTON, S. C., Oct. 29, 1900.

To the Editor:—Your editorial in issue of October 27, "Physicians and the Hall of Fame," should meet the hearty endorsement of the entire profession, and I trust you will push the matter further. The name of Dr. Marion Sims should in my opinion be foremost in the minds of all. Yours truly,

EDWARD F. PARKER, M.D.

Association News.

The following names were omitted from the complete list of members as published in THE JOURNAL, September 29:

Pratt, E. L., Winsted, Conn.
Guthrie, H. R., Sparta, Ill.
Salmon, W. T., Oklahoma City, O. T.
Williamson, N., New Brunswick, N. J.
Barbour, Philip F., Louisville, Ky.
Kessinger, E. M., Sandborn, Ind.
Watson, G. H., Bridgewater, Mass.
Schwab, Leslie W., Chicago, Ill.
Langdon, F. W., Cincinnati, Ohio.
Reilly, Thomas F., New York City.
Carr, A. P., St. Clair, Pa.
Watson, G. H., Bridgewater, Mass.

The following corrections should also be noted:

L. D. Mason, Greenwich, Conn., should be Brooklyn, N. Y.
G. W. Piske, Carlisle, Ind., should be G. W. Pirtle.
R. H. Burrell, Manistique, Mich., should be Omaha, Neb.
J. M. Jackson, Kansas City, Mo., should be Jabez N. Jackson.
H. E. Pearce, Kansas City, Mo., should be H. E. Pearse.
W. P. Sexton, Kansas City, Mo., should be M. P. Sexton.
Wm. E. Guthrie, Sparta, Ill., should be Bloomington, Ill.
M. A. Bogie, St. Louis, Mo., should be Kansas City, Mo.

New Members for October.*

ALABAMA.
Perry, Henry G., Greensboro.

ARKANSAS.
Bernart, Wm. F., Hot Springs.
Clyne, Adolphus G., Bethel.
Newton, I. J., Little Rock.
Norwood, M. L., Lockesburg.
Simpson, John W., Hamburg.

CALIFORNIA.
Davison, Wm. A., Bridgeport.
Shannon, James M., Oakland.
Stafford, A. A., Alameda.
Sullivan, Wm. N., San Francisco.
Thorpe, A. C., Los Angeles.

COLORADO.
Thompson, David, Denver.

CONNECTICUT.
Coops, Frank H., Danielson.
Gilbert, Sam'l D., New Haven.
Hallock, Frank K., Cromwell.
Hurd, Alonzo L., Somers.
Smith, Edw. W., Meriden.

WASHINGTON, D. C.
Clark, Geo. C., Washington.

GEORGIA.
Nolan, Chas. T., Marietta.
Robinson, Walter C., Atlanta.

ILLINOIS.
Andrews, A. H., Chicago.
Carpenter, Edwin A., Baileyville.
Glidden, Stephen C., Dansville.
Kuh, Edwin J., Chicago.
Spaulding, Heman, Chicago.
Trigg, Jos. M., Farmersville.
Wiatt, Wm. S., East St. Louis.
Weber, Geo. T., Olney.

INDIANA.
Dugdale, Richard B., South Bend.
Green, W. F., Shelbyville.
Keim, Peter S., Mexico.
Kelly, J. C., Mexico.
Little, C. S., Evansville.
Longfellow, F. W., Windfall.
McFarlin, John T., Williams.
McKee, H. N., Woodburn.
Moffett, Wm. R., La Fayette.
Molz, Chas. O., Bedford.
Morgan, R. R., McCordsville.
Schuman, Oliver V., Columbia City.
Spinning, A. L., Michigan City.
Walker, Wm. S., Lafayette.
Wiley, Harriet, Portland.

IOWA.
Bower, E. L., Guthrie Center.
Breen, Mary, Le Mars.
Dales, John A., Sioux City.
Evens, Leo E. O., Osage.
Finlayson, J. A., Armstrong.
Rich, R. Gilbert, Hampton.
Kelley, B. C., Carroll.
Louder, Wm., Ledyard.
Sargent, Frank L., Marion.
Seymour, Wm. H., Plainfield.
Skinner, Geo., Winterset.
Wheelwright, D. W., Wall Lake.

KANSAS.
Howard, Wm. F., Cuba.

KENTUCKY.
Bindewald, W. A., Louisville.
Carlton, R. E., Bethany.
Curlin, C. W., Hickman.
Glass, A. M., Booneville.
Lapsley, Frank, Paris.
Simmons, Henry R., Corinth.
Strickler, F. P., Elizabethtown.

LOUISIANA.
Furman, Francis S., Shreveport.
Sexton, L., New Orleans.

MARYLAND.
Kahn, Samuel, Baltimore.

MASSACHUSETTS.
Johnson, Wm. L., Uxbridge.
Otis, E. O., Boston.

MICHIGAN.
Carson, Chas. J., Marshall.
Georg, Conrad, Jr., Ann Arbor.
Holmes, A. D., Detroit.
Hooker, Chas. E., Grand Rapids.
Irwin, T. C., Grand Rapids.

MINNESOTA.
Cummings, D. S., Waseca.
Ferguson, James B., Olivia.
Hammes, E. W., Hampton.
Hobday, Wm. A., Marshall.

MISSOURI.
Forster, Jefferson D., Wellsville.
Young, Oscar O., Greenwood.

NEBRASKA.
Anderson, August, Norfolk.
Roberts, Jay G., Hastings.

NEW HAMPSHIRE.
Stokes, Dudley L., Rochester.
Lavallee, Arthur M., Suncook

NEW JERSEY.
Beekman, John B., Pluckemin.
Buermann, Wm., Newark.
Elsing, Henry C., Ridgefield Park.
Hoffman, Peter, Jersey City.
Watson, Wm. P., Jersey City.

NEW YORK.
Allen, H. J., Corinth.
Atwood, John W., Fishkill-on-Hudson.
Bell, Chas. T., New York City.
Boyd, August S., New York City.
Brownell, F. V., Canajoharie.
Brown, Samuel A., New York City.
Cohen, Bernard, Buffalo.
Divine, Alice, Ellensville.
Halley, Samuel H., New York City.
Hartwig, Marcel, New York City.
Hayunga, Geo. A., New York City.
Hewitt, Adelbert, Saratoga Springs.
Frank, Isaiah, New York City.
Lewengood, Samuel, New York City.
Lothridge, Wm. E., Verdoy.
Munson, Alban E., New York City.
Nutt, John J., New York City.
Palmer, Elbert A., Saratoga Springs.
Palmer, Walter W., New York City.
Rosenberg, Leo, New York City.
Sanford, Waldo H., Saratoga Springs.
Scratchley, Francis A., New York City.
Shrady, Arthur M., New York City.
Seabrook, H. H., New York City.
Smith Cassar, Olean.
Smith, Julian C., Oneonta.
Sornberger, S. J., Cortland.
Toms, Samuel W. S., Nyack.
Torrey, Edward, Allegheny.
Vincent, W. H., Hinsdale.

NORTH CAROLINA.
Brownson, Wm. C., Asheville.
Knox, A. W., Raleigh.
McBrayer, L. B., Asheville.
Whitehead, Richard H., Chapel Hill.

OHIO.
Howard, Wm. T., Jr., Cleveland
Kline, P. J., Portsmouth.
Maynard, O. T., Elyria.
North, John, Toledo.
Peterson, H. D., Kelley's Island
Teachnor, Wells, Columbus.

OREGON.
Coffey, R. C., Portland.

PENNSYLVANIA.
Bailey, Milton R., Philadelphia.
Markel, C. F., Columbia.
Richards, Daniel W., Easton.
Rohrer, Geo. R., Lancaster.
Wagner, E. C., Wilkesbarre.
Ferguson, Richard, Columbia.

SOUTH CAROLINA.
Aimar, C. P., Jr., Charleston.
Boozer, A. E., Columbia.
Faison, Julius A., Bennettsville.
Forrest, John, Charleston.

TENNESSEE.
Coston, Hamilton R., Fayetteville.
Gardner, Ralph L., Wales.
Hutchison, John L., Tiptonville.
Nunn, W. T., Chestnut Bluff.
Tatum, Robert H., Chattanooga.

TEXAS.
Palmer, Luther B., Petty.

UTAH.
Jones, Everett O., Murray.

*The complete list of members of THE AMERICAN MEDICAL ASSOCIATION was published in THE JOURNAL September 29. The list here printed contains the names of all who have joined since the complete list was published. Hereafter the names of new members will appear each month.

VERMONT.

Baker, O. C., Brandon.
Bartlett, C. W., East Dorset.
Baylies, Frederick W., Burlington.
Chisholm, A. S. M., Bennington.
Heminway, Lewis H., Manchester.
Newton, Luther B., North Bennington.
Newell, Robert L., Rutland.
Watkins, H. R., Burlington.
Barringer, Paul B., Charlottesville.
Hains, Franklin W., Petersburg.

WASHINGTON.

Hoffman, Carl, Seattle.

WISCONSIN.

Bellack, Bernhard F., Columbus.
Chapman, Francis M., Sussex.
Doege, Karl, Marshfield.
Fuchs, Albert F., Loyal.
Harris, Ben F., Lac du Flambeau.
Lercher, Wilhelm, Soldiers Grove.
O'Connor, W. F., Tony.
Oettiker, James, Platteville.
Williamson, Geo. H., Mattoon.

Book Notices.

A TREATISE ON MENTAL DISEASES. Based upon the Lecture course at the Johns Hopkins University, 1899, and Designed for the Use of Practitioners and Students of Medicine. By Henry J. Berkley, M.D., Clinical Professor of Psychiatry, Johns Hopkins University. With Frontispiece, Lithographic Plates and Illustrations in the Text. Cloth. Pp. 601. Price, $5.00. New York: D. Appleton & Co. 1900.

The production of a work on mental diseases, especially a comprehensive and elaborate one, is one of the most difficult tasks that any author can take upon himself, and yet there are quite a number who are ready to attempt it. The present volume is the latest addition to the literature in this country on this subject, and is a very worthy one. Dr. Berkley has attempted to give an account of insanity in its various phases, largely in the light of modern neuro-psychology. He, therefore, commences with a rather elaborate, though not too extended, account of the cortical histology and modern views in regard to its mechanism. The special pathology of the nerve elements and other cerebral organs are also duly considered. The clinical section of the work, however, is more developed than is sometimes the case with those who have attempted to discuss the subject of insanity in this way, and, in the main, the author's method is a useful and satisfactory one. His classification of mental diseases, a matter which he does not altogether slight, is a very simple one, including only four general groups: 1. Mental diseases without appreciable pathologic alteration of the brain substance, or psychoneuroses. 2. Mental diseases sequential to ascertainable alterations, comprising particularly the intoxications, including autointoxications. 3. Those due to inherited or acquired mental instability, or the degenerative insanities. 4. States of complete or incomplete retardation of psychic and physical development. This classification has the advantage of simplicity and in many respects meets the demands. The specific forms are those generally recognized and enumerated in textbooks. The author's idea of neurasthenic insanities is a comprehensive one, as he includes nearly the whole condition in his treatment of the subject, but this is the principal criticism, if it is really a valid one, that we should offer. Each subject is followed by a more or less complete bibliography of literature, while foot-notes are generally omitted. The book is a valuable addition to the literature of insanity, and should be in every alienist's hands. It is very handsomely printed and illustrated, and will undoubtedly meet with favor.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XX. Tuberculosis, Yellow Fever, and Miscellaneous, General Index. Cloth, Pp. 906. Price, $5.00. New York: William Wood & Co. 1900.

About half of this volume is taken up with a discussion of tuberculosis in its various aspects, the principal contributors being D. Lartigau, who discusses its bacteriology, pathology and etiology, and Dr. Knopf, who treats of its diagnosis, prognosis, prophylaxis, and treatment. The symptomatology is handled by Dr. H. W. Berg, of New York, and tuberculosis of the skin forms the subject of a chapter by John T. Bowen, of Boston. All of these articles are, as might be expected, up to date, and convey the current, accepted views of the disease. The subject of yellow-fever occupies over 100 pages, considerable attention being given to the geographic distribution and the origin of the disorder, prophylactic measures, quarantine, disinfection, etc., as well as to the pathology, symptomatology and treatment of the disease itself. Other subjects in the volume are snake-bites and mushroom poisoning, diseases of the uvula and soft palate, and the neural and mental defects in children, the latter by Francis Warner, of London, the only non-American contributor. The general index for the whole series takes up about one-third of the book—a total of a little over 300 pages. The series thus completed forms a very valuable manual of general medicine which will probably hold its own for some time to come, and as a monographic work, or rather a series of monographs, will be a work of reference for all times.

THE CARE OF THE CHILD IN HEALTH. By Nathan Oppenheim, A.B. (Harv.), M.D. (Col. of P. & S., N.Y.), Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary. Cloth. Pp. 300. Price, $1.25. New York: The MacMillan Co. 1900.

This little volume, from such examination as we have been able to give it, appears to be in every way an excellent manual on its subject. The author's views are clearly expressed, and are in accord with the best thought on the subjects of training and care of children, their education, disorders and defects. For its compass too, it is very full and complete, and we notice little that could be made much fuller without unduly enlarging the book. The book should be in the hands of not only physicians, but of educators and parents as well, and we bespeak it a wide circulation among all these classes.

THE MENTAL AFFECTIONS OF CHILDREN; IDIOCY, IMBECILITY AND INSANITY. By William W. Ireland, M.D., Corresponding Member of the Psychiatric Society of St. Petersburg. Second Edition. Cloth. Pp. 450. Price, $5.00. Philadelphia: P. Blakiston's Son & Co. 1900.

This is a recent edition of the work published by Dr. Ireland two years ago, which has already found its place in medical literature, and which was itself really a second edition of an earlier, though smaller volume. No very extensive addition has been made to the present work, though it has been revised and brought up to date. Dr. Ireland is thoroughly acquainted with American work in this line, as indeed every one should be, and his references to American authors are numerous and appreciative. The work will maintain its well-earned place as a standard on the subjects of defective and idiotic conditions in children.

STUDIES IN THE PSYCHOLOGY OF SEX. The Evolution of Modesty, the Phenomena of Sexual Periodicity, Auto-Erotism. By Havelock Ellis. Cloth. Pp. 275. Price, $2.00. Philadelphia, New York and Chicago: F. A. Davis Co. 1900.

This volume has the distinction of not being permitted to be published in the English language in Great Britain, hence it appears in the German, and its first English edition comes to light in this country. It is a scientific treatise, and as such we do not see exactly how it could be ruled out, though undoubtedly the English authorities recognized the fact that it would be sought for by those who were not scientifically minded, and thus come under the condemnation which we recently gave Krafft-Ebing's work on a somewhat allied subject. The present volume seems much less objectionable in its management of its theme than does that of Krafft-Ebing.

ATLAS AND EPITOME OF DISEASES CAUSED BY ACCIDENTS. By Dr. Ed. Golebiewski, of Berlin. Authorized Translation from the German, With Editorial Notes and Additions by Pearce Bailey, M.D. Pages, 549; 40 Colored Plates; 143 Illustrations in black. Price, $4.00 net. Philadelphia: W. B. Saunders & Co. 1900.

The intention in publishing this book is, as stated in the preface, "to present a systematic description of the sequels of injuries caused by accidents." "The book is expected to be of interest not only to medical practitioners, but also to students" and "to laymen whose interests are connected with accident-insurance."

According to the German law, all workmen, with few exceptions, are insured against accidents received while at their work. This has been the means of stimulating greatly the study of such accidents and their sequels, and the author's

experience in this line has been particularly large. There is shown a tendency, at times, to extend the effects of injuries beyond what can legitimately be proved. As, for instance, to associate a carcinoma of the kidney with an accident that occurred seventeen years before; to ascribe arteriosclerosis, dementia paralytica and pulmonary emphysema to accidents.

The previous condition of the patient is sometimes not sufficiently considered, as in the case in which locomotor ataxia is said to have resulted from a simple sprained ankle. The patient was a syphilitic, the sprain due to a mis-step and the ataxia was well marked when he got up four weeks after the injury. It is more than probable that the tabes long antedated the sprained ankle.

The indemnity, or "rente" as it is called, is estimated in percentage of earning power during the time of disablement, and little is said of the time necessary to recover. It would have added to the value of the work to American readers had the time element been more fully discussed. These few points, however, are more than counterbalanced by the general excellence of the work. It is quite unique in its kind, and contains much valuable information. The colored plates are all works of art and the skiagraphs illustrate many obscure points in injuries of the bones, and particularly in injuries of the foot.

The work can be recommended to all who have to deal with accidents and accident insurance.

Diseases of the Tongue. By Henry T. Butlin, F.R.S., D.C.L., Surgeon to St. Bartholomew's Hospital; formerly Erasmus Wilson Professor of Pathology and Hunterian Professor of Surgery at the Royal College of Surgeons; and Walter G. Spencer, M.S., M.B. (Lond.), F. R. C. S., Surgeon to the Westminster Hospital, and in charge of Department for Diseases of Nose and Throat; formerly Erasmus Wilson, Professor of Pathology at the Royal College of Surgeons. Illustrated with 8 chromolithographs and 36 engravings. Cloth, pp. 475. Price $3.25. London, Paris, New York, Melbourne: Cassell & Company (Limited), 1900.

The first few chapters on the minor diseases of the tongue and semeiology are poorly written. The English is so badly distorted that it is necessary to re-read many sentences in order to grasp their meaning. We find such expressions as "the cutis vera of the mucous membrane," "either of the three," and such sentences as: "The patient finally died exhausted." "A Prussian soldier had his teeth driven into his mouth by a bullet." "In Green's case the cyst was the size of a small bird's egg at ten years of age." (Just think of an egg ten years old!) "The patient swallowed the next day." "The treatment is such treatment as is good for the cure of the eruption on the skin." These are but a few of the many. Such loose expressions as "the size of an ordinary nut" (peanut or cocoa-nut?), should not be used in a scientific work, nor should a thing be measured in inches and weighed in grams. Some uniformity should exist. However, when we reach the chapters on malignant diseases it seems as if another mind was guiding the pen. The sentences are clear and the words well chosen. A complete mastery of the subject is shown. The author's views on early diagnosis and early treatment of malignant growths are so sound and so forcibly expressed that they should be read by all who are likely to come in contact with these cases. The excellence of the part of the work more than counterbalances the defects of the other chapters, and makes the work a valuable one. A number of good colored plates illustrate well the various conditions described.

A Treatise on Appendicitis. By John B. Deaver, M. D., Surgeon-in-Chief to the German Hospital, Philadelphia. Second Edition. Thoroughly Revised and Considerably Enlarged. Illustrated with Twenty-two Full Plates. Cloth. Pp. 300. Price, $3.50. Philadelphia: P. Blakiston's Son & Co. 1900.

The first edition of this book was so well received and is so well known that it is necessary to mention only such changes and additions as appear in this, the second edition. The most noteworthy addition is the chapter on the pathology of appendicitis, written by Dr. A. O. J. Kelly. This covers 120 pages, and is based on a careful and systematic study of the large amount of material placed at his disposal by the author.

The various pathologico-histologic changes are well described and excellently illustrated by numerous plates in color, and black and white, and the work of others in the same line receives due consideration.

The author's views on treatment are forcibly and positively expressed, in a manner born of honest convictions based on a very large experience. His advice to operate immediately in all cases in which an early diagnosis has been made—within the first forty-eight hours—and in which no contraindication exists to operation, will, perhaps, when carried out by the experienced surgeon and with ideal surroundings offer the greatest chance of recovery to the greatest number and is the position toward which most surgeons of large experience lean today. In case operation for any reason is not undertaken, the use of cathartics as a routine treatment is strongly recommended. While it is certainly advisable to have the stomach and intestines thoroughly emptied in acute appendicitis, the indiscriminate and persistent use of cathartics may as unquestionably do harm by keeping up a disturbance of these organs at a time when rest is most desirable. Discrimination and judgment should certainly be exercised.

It would have added much value and interest to the work had the unusually large material been worked up statistically, particularly as regards results and sequelæ, such as ventral herniæ, post-operative adhesions, etc. The difficulties associated with the task, however, are recognized. The work as it stands is an excellent one and should be read as well by physicians and surgeons. The author's style is clear and forcible, and can not fail to carry conviction.

A Treatise on Nasal Suppuration; or Suppurative Diseases of the Nose and Its Accessory Sinuses. By Dr. Ludwig Grunwald, of Munich. Translated from the Second German Edition by William Lamb, M.D., M.C. Edin., M.R.C.P. Lond., of Birmingham. With Eight Illustrations in the Text, Two Plates, and One Table. Cloth. Pp. 335. Price, $3.00. New York: William Wood & Co. 1900.

As the translator says in his preface, this is the only book in our language which deals with its subject in any detail, hence the reason for its translation and its introduction to English-speaking readers. Dr. Lamb has attempted to convey the author's meaning as concisely and clearly as possible and the work will be appreciated by the general practitioner as well as the specialist, for nasal disorders do not always occur within the immediate reach of practitioners devoted to this particular class of disease. The book should, therefore, have rather a wide circulation.

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Dueck, Assistant in the Pathologic Institute; Prosector to the Municipal Hospital, L.I., in Munich. Authorized Translation from the German. Edited by Ludwig Hektoen, M.D., Professor of Pathology in Rush Medical College, Chicago. Circulatory Organs; Respiratory Organs; Gastrointestinal Tract. With 62 Colored Plates. Cloth. Pp. 158. Price, $3.00. Philadelphia: W. B. Saunders. 1900.

In the present volume, which is one of a series, the circulatory organs, respiratory organs and gastrointestinal tract are considered.

The pathologico-histologic changes which take place in the typical diseases of the various organs mentioned are briefly but clearly described, and most excellently illustrated by the numerous colored plates.

The work will find a valuable place, not only with the student in the laboratory, but with the physician who desires to keep himself informed of the progress made in pathology.

The Medical Diseases of Childhood. By Nathan Oppenheim, A.B., M.D., Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary, with 101 Original Illustrations in Half-tone and 19 Charts. Price $5. New York: The MacMillan Company. 1900.

Dr. Oppenheim's former work, "Development of the Child," is an extraordinary book. No one interested in children can afford to overlook it. That work created somewhat of a furore among educators, and it is but natural that physicians who were acquainted with it should be eager to examine his new work on pediatrics. While this one is not so remarkable from

the medical standpoint as the other was from an educational point of view, still it is a valuable work. It is up to date in every respect, except in treatment, which does not receive sufficient attention. The descriptions of lesions and symptoms are strong. The book is a good one and deserves a wide popularity. We can cordially recommend it to the profession.

Marriages.

HENRY HALPERT, M.D., to Miss Evelyn Morris, both of Scranton, Pa., October 25.

THOMAS W. COOPER, M.D., Brownsville, Tenn., to Mrs. Sarah Dinsdale, De Vall's Bluff, Ark., October 25.

JOSEPH A. HALLANAN, M.D., Logansport, Ind., to Miss Nora Mowers, Fayetteville, Pa., October 21.

ARCHIBALD M. WILKINS, M.D., Delta, Ohio, to Miss Bertha E. Morris, of Hillsdale, Mich., October 23.

H. SOMERVILLE, M.D., Chest Springs, Pa., to Miss Catherine Burgoon, of Ashville, Pa., October 25.

ALAN W. SMITH, M.D., Baltimore, Md., to Miss Alvira Adele Bennett, of Portland, Ore., October 31.

CHARLES S. MANGUM, M.D., Chapel Hill, N.C., to Miss Laura Rollins Payne, of Washington, D.C., October 25.

Deaths and Obituaries.

LOUIS W. READ, M.D., University of Pennsylvania, 1859, a surgeon in the Crimean and Civil Wars, and for 25 years surgeon-general of the National Guard of Pennsylvania, from heart failure, at Norristown, November 1, aged 72.

JOHN G. DAVIS, M.D., major and surgeon, U. S. V., formerly of Chicago, at Manila, Philippine Islands, from Bright's disease, superinduced by exposure in line of duty, November 1, aged 52.

JOHN WINSLOW, M.D., Bellevue Hospital Medical College, 1866, the oldest physician of Ithaca, N. Y., suddenly from heart disease, October 28, aged 65.

WILLIAM T. JONES, M.D., Bellevue Hospital Medical College, 1866, of Pine Bush, N. Y., from neuralgia of the heart, at San Antonio, Texas, September 26.

WILLIAM H. TURNER, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1856, at his home near Keokuk, October 29, aged 66.

DAVID NEWCOMER, M.D., Jefferson Medical College, 1859, at Mount Morris, Ill., after an illness of several months, October 19, aged 70.

AUGUSTUS MUMFORD, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1882, at Kimball, Minn., from typhoid fever, October 27.

WALLACE A. SIBLEY, M.D., University of Buffalo, 1875, at Rochester, N. Y., from organic heart disease, October 28, aged 54.

NATHAN A. DALRYMPLE, M.D., University of Wooster, O., 1877, from angina pectoris, at Pasadena, Cal., October 26, aged 45.

MICHAEL W. KELLIHER, M.D., New York University, 1886, suddenly, from poison, at Pawtucket, R. I., November 1.

SAMUEL L. MONTGOMERY, M.D., New York University, 1880, of Concord, N. C., at Apex, N. C., October 26, aged 45.

MATTHEW J. GRIER, M.D., University of Pennsylvania, 1863, at his office in Philadelphia, October 28, aged 63.

JAMES MCNUTT, M.D., University of Iowa, 1874, of Columbia, Mo., at Bowling Green, Mo., aged 71.

JOHN C. MORGAN, M.D., Rush Medical College, 1869, recently at Sioux Falls, S.D.

Light from Bacteria.—The *Lancet* states that pure cultures of the photo-bacterium—which is the cause of the phosphorescence of the sea—can be obtained by placing a fresh haddock or herring in a 2 per cent. salt solution and keeping it at about 7 degrees above freezing. In a few days the fish and all the fluid give off a pale greenish light, made more brilliant by adding a little sugar. The cultures can even be photographed by their own light.

Societies.

Southern Surgical and Gynecological Association, Atlanta, Ga., Nov. 13-15.
The Tri-State Medical Association of Mississippi, Arkansas and Tennessee, Memphis, Nov. 13-15.
Oklahoma Territory Medical Society, Oklahoma City, Nov. 15.
Indian Territory Medical Association, Muscogee, Dec. 4-5.
Pan-American Medical Congress, Havana, Cuba, Dec. 26-28.
Western Surgical and Gynecological Association, Minneapolis Minn., Dec. 27-28.

THE CEDAR VALLEY (Iowa) MEDICAL SOCIETY, at its annual meeting at Waterloo, October 4, elected Dr. Frank H. Cutler, Cedar Falls, president.

THE DALLAS-GUTHRIE (Iowa) MEDICAL ASSOCIATION held its annual meeting at Panora, October 25, and elected Dr. Calvin O. Sones, Panora, president; Dr. Samuel J. Brown, Panora, corresponding secretary, and Dr. William J. Williams, Adel, treasurer.

THE BROOKFIELD (Mass.) MEDICAL CLUB held its annual meeting October 24, at Ware, and was entertained by Dr. Maurice W. Pearson. The following officers were elected: Dr. Charles A. Blake, West Brookfield, president; Dr. Albert H. Prouty, North Brookfield, vice-president; and Dr. James C. Austin, Spencer, secretary and treasurer.

THE MEDICAL SOCIETY OF THE WOMAN'S MEDICAL COLLEGE (Baltimore) held its first meeting of the season on October 23. Officers for the year were elected as follows: Dr. E. F. Cordell, president; Dr. W. Milton, Lewis, vice-president; Dr. Mary N. Browne, recording secretary; Dr. Annie C. Shipley, corresponding secretary; Dr. Jennie N. Browne, treasurer. The President's Address was on "The Lameness of Sir Walter Scott."

THE CORSICANA DISTRICT (Texas) MEDICAL ASSOCIATION met at Corsicana, October 23, for its annual meeting. Dr. Benjamin F. Houston, Corsicana, was elected president; Drs. J. W. Price, King Willow and John A. McGee, Rice, vice-presidents; Dr. John B. Clark, Corsicana, secretary, and Dr. William T. Shell, Corsicana, treasurer.

THE MASON COUNTY (Ky.) MEDICAL SOCIETY met at Maysville, October 31. Papers were read by Drs. Amos G. Browning, on "Certain Forms of Heart Disease as Conducive to Fatal Toxemia," and by Dr. A. N. Ellis on "Color Blindness." The society appointed a committee to draft resolutions of respect to the memory of the late Dr. Samuel Pangburn.

THE HARTFORD COUNTY (Conn.) MEDICAL SOCIETY held its semi-annual meeting October 17, at which papers were presented by Dr. Frederick T. Simpson on "Mental and Physical Culture in High Schools"; Dr. Hermann Strosser, New Britain, on "Anesthesia and Anesthetics"; Dr. Oliver C. Smith, on "Pneumonia"; Dr. George R. Shepherd, on "Intra-Spinal Injections of Cocain"; and Dr. William T. Bacon, on "Ophthalmia Neonatorum."

THE CUYAHOGA COUNTY (Ohio) MEDICAL SOCIETY held an "Appendicitis Symposium" at Cleveland, October 7, at which papers bearing on various phases of the subject were presented by Drs. Guy H. Fitzgerald, Charles B. Parker, Charles G. Foote, Louis B. Tuckerman, and Joseph V. Kofron. The usual contest between the medical and surgical treatment of the disease was waged, and with the usual negative result.

THE PHYSICIANS' CLUB (Chicago) devoted its session of October 29 to matters educational. Superintendent of Schools Cooley spoke on "Manual Training"; Miss Laura W. Sanborn, director of physical training in the Chicago Normal School, read a paper on "Physical Training"; Dr. H. B. Favill, one on "Stages of Development in Relation to School Work"; Dr. Arthur R. Reynolds, one on "Medical Inspection of Schools," and Col. Francis W. Parker, of the Chicago Institute, closed with an address on "Education as a Factor in Pathogenesis." A resolution was passed commending the work of the department of medical inspection of schools.

THE UNION DISTRICT MEDICAL SOCIETY met at Hamilton, Ohio, October 25. Dr. Mark Milliken, Hamilton, was elected president, and Dr. Everett R. Beard, Liberty, Ind., secretary. Papers were read by Dr. John C. Sexton, Rushville, Ind., on "Lumbar Cocainization"; Dr. Harry W. Hawley, College Corner, Ohio, on "Gall-Stones"; Dr. James G. Grafft, Trenton, Ohio, on "Amputations in Children"; and Dr. David W. Stevenson, Richmond, Ind., on "The Physician's Success from a Business and Intellectual Standpoint." The address of the president, Dr. Garrett Pigman, Liberty, Ind., embodied a brief history of the Society.

The Virginia Medical Society held its thirty-first annual session at Charlottesville, October 23, 24 and 25. After the addresses of welcome, Dr. John N. Upshur, Richmond, delivered an address on "The Mutual Relations of the Public and Profession." The address of the president, Dr. Hugh T. Nelson, Charlottesville, was on "The Functions of Medical Societies in General and the Medical Society of Virginia in Particular." In closing he paid an eloquent tribute to the memory of "Virginia's great surgeon, Hunter McGuire." A portion of the session was devoted to clinical reports, after which the general subject of "Malaria," was opened for discussion by Dr. H. Stuart MacLean, Richmond. Dr. Joseph H. White, Richmond, presented a letter from Dr.William H. Taylor, Richmond, protesting vigorously against the present treatment and payment of medical experts in Virginia, and asking the society to take steps for their relief. He cited several cases in which he had been compelled to go great distances as an expert, and when he had rendered the service required and presented his bill, he was confronted with the statement that "there is no law authorizing the payment of medical experts." The court before which he had testified, the state auditor, and the attorney-general of the state had all assured him of this painful and serious fact. After a protracted discussion, the matter was finally referred to the legislative committee, with instructions to place it before the next legislature and endeavor to secure fairer laws on the subject. The subject of the special-license tax excited considerable debate, but all one side—that it be removed. Dr. J. Beverley De Shazo, Ridgeway, introduced the following preamble and resolution: "Whereas, the physicians of Virginia look after the public sanitation, make self-supporting citizens of diseased paupers, fight down deadly epidemics and do more charity work than all other professions combined; and, Whereas nearly every other state in the United States has repealed special-license tax laws on physicians; be it Resolved, That the medical profession of the state, through its State Medical Society, declares this an unjust law and begs the legislature of Virginia for a repeal of this measure at its next session." The matter was referred to a special committee. Dr. R. Sumter Griffith, Basic City, offered a resolution "that the judge of each county be requested by the secretary of the State Board of Health to appoint as members of the county board, physicians who are members of the county medical society. If no such society exists, then to appoint from members of the State Medical Society." which was adopted. Many papers were read and discussed, after which the following officers were elected: Dr. J. R. Gildersleeve, Tazewell, president; Dr. John H. Neff, Harrisonburg, first vice-president; Dr. James E. Copeland, Round Hill, second vice-president; Dr. Charles W. Pritchett, Danville, third vice-president; Dr. Landon B. Edwards, Richmond, recording secretary for the thirty-sixth time; Dr. John F. Winn, Richmond, corresponding secretary, and Dr. Richard T. Styll, Newport News, treasurer. The next meeting will be held in Lynchburg, Va., during the fall of 1901, the exact date being determined by the local committee of arrangements.

Vermont State Medical Society.

Annual Meeting, Rutland, Oct. 11 and 12, 1900.

President Dr. M. R. Crain, Rutland, in the chair.

REPORT OF COMMITTEE ON REORGANIZATION.

The special committee appointed last year to report a plan for the reorganization of the society, on a basis of representation from county or district medical societies, presented their report. The plan proposed is essentially that of the Connecticut Medical Society, with modifications similar to those recently embodied in the plan of reorganization of the New York Medical Association.

The committee recommends: the establishment in each county of a county medical society, which shall be a branch of the State Society; membership in the State Society—excepting the present members—to be obtained only through the county societies; the county societies to be composed primarily of the members of this Society resident in the county; in case there is at present a county society in any county, the same may become a branch of this Society: the formation of a county society to be obligatory in all cases where there are ten or more physicians who are members of the State Society; the officers of the State Society and the chairman of the regular committees—and if deemed advisable, the presidents of the county societies—to be designated "The Council"; The Council to manage the affairs of the Society when not in session; each county society to elect annually one "Fellow" for every ten members, and for every additional fraction of more than half that number to represent it in the parent society; "The Council" and the "Fellows" to constitute "The Governing Board," which shall conduct the business of the annual meeting; the officers to be elected annually by the Governing Board, or by the Society, as deemed best; the "Fellows" elected each year, to be the delegates to The American Medical Association; each county society to elect its own officers and enact its own laws, provided the latter are not at variance with the laws of the parent society: one fee—payable to the county society—to cover membership in both the county and the State Society and entitle the member to the "Transactions of the State Society"; the State Society to take on itself the duty of defending all suits for malpractice and all suits in any way affecting the professional status of any of its members, when unjustly brought, and to take cognizance of and prosecute violations of the Medical Practice Act, or of the laws of public health. The report further suggested the advisability of the society creating a fund for the care of the aged among its members, when necessary.

The report was discussed by a large number and much enthusiasm was manifested in the remarks of many of the members. The Society as a whole seemed awakened to the necessity of a better and more thorough organization of the medical profession in the state. The report was accepted, and a special committee, consisting of Drs. D. C. Hawley, of Burlington, George H. Gorham, of Bellows Falls, J. N. Jeune, of St. Albans, W. H. Vincent, of Orwell, and H. D. Holton, of Brattleboro was appointed to perfect the plan, frame new by-laws, etc., and report at a special meeting or at the next annual meeting.

LOCALIZATION OF THE LESION IN PARALYSIS.

Dr. M. R. Crain, of Rutland, delivered the president's annual address on the above topic, in which he said there are two general divisions of paralysis: atrophic and non-atrophic. In the former there is rapid wasting of the muscles, for the reason that the lesion is situated at the atrophic center, or at some part of the tract between the tropnic center and the paralyzed muscles, which being cut off from the center that controls nutrition, waste rapidly. The lesion may be in the brain, the spinal cord, the peripheral nerves, or their nerve roots. The non-atrophic form is caused by a lesion of the primitive motor centers or some part of the tract between the motor and the trophic center, causing paralysis without wasting of the muscles, except from disuse. In all cases of paralysis there occurs secondary degeneration of the nervous tract affected, and the degeneration occurs in the direction that the impulses travel. The diagnosis between the two general forms of paralysis is in most cases easy, unless the lesion is so recent that there has not been time for wasting of the muscles to occur. In most cases of atrophic paralysis, the muscular wasting is so great that a diagnosis can be made by inspection. Where this is not possible on account of the recent date of lesion, or on account of the muscles being small, or deeply covered with fat we can bring to our aid electro-diagnosis. All cases of atrophic paralysis, excepting muscles supplied by the cranial nerves, are caused by lesion of the peripheral nerves, their nerve roots, or the anterior horns of gray matter of the spinal cord. If the lesion is in the peripheral nerves there is sensory as well as motor paralysis, but if the paralysis is not complete, sensation is less impaired than motion. If the lesion is confined to the anterior horns, there is motor paralysis without impairment of sensation.

Atrophic paralysis of muscles supplied by the cranial nerves may be produced by lesion of the trophic centers at the base of the brain, the medulla, and the upper part of the cord, also by lesion of the cranial nerves themselves, or by pressure, from swelling of their sheaths as they pass through their bony foramina. As some of these nerves are nerves of motion only, we may have motor paralysis without impairment of sensation. The non-atrophic paralyses are always central, and are caused by lesion of the primitive centers of motion in the cerebrum or in the path between them and the traffic centers situated at the base of the brain, the medulla oblongata, or the spinal cord.

Impairment of sensation may or may not be present, according to the location and extent of the lesion.

TREATMENT OF THE EYE BY THE GENERAL PRACTITIONER.

DR. GEORGE H. GORMAN, Bellows Falls, presented the vice-president's address with the above title. The general practitioner should be able to diagnose and correctly treat the common diseases of the eye. There are in the United States, according to the census of 1890, over 50,000 persons who are totally blind, and Vermont has the largest relative number of any state in the Union. Great responsibility rests on the general practitioner to properly care for patients with diseases of the eye, as they are in the majority of cases the first to see them. At the time Credé originated his method of treating ophthalmia neonatorum with strong solutions of nitrate of silver, 10 per cent. of all cases in his lying-in-hospital were afflicted with the disease. At present only .02 per cent. are so afflicted. It is not necessary in general practice to follow this method in all cases, but the silver solution should be used in all suspicious cases. A 1 per cent. solution is generally strong enough. The use of a 1 to 5000 bichlorid solution is also good treatment. One-fourth of all the cases of blindness in the civilized world are due to this disease. All children whose distant vision does not reach a certain standard, or whose near point is abnormal, and all with inflamed eyes or lids should receive attention. Asthenopia or eye-strain is exceedingly common in school children, and its treatment is almost imperative. Hygienic surroundings should receive attention, and all errors of refraction should be corrected. Many functional disturbances of the nervous system are due to strain on the ciliary muscle of the eye, or to an unbalanced condition of the extrinsic muscles of the eyeball, and the correction of these conditions will go far in relieving many cases of neurasthenia, epilepsy or hysteria. Chronic or subacute inflammations of the conjunctiva are too often mistaken for trachoma, which is comparatively rare, here in this part of the country. For these cases strong tannic-acid solution, nitrate of silver solution, and subconjunctival injections of bichlorid of mercury 1 to 1000 are proper. Never use poultices. Hot boric-acid solutions are nearly always permissible, except in cases of injury and acute purulent ophthalmia, when ice-bags or other cold applications are better.

HEMANIOPIA.

DR. A. S. M. CHISHOLM, Bennington, read a paper with the above title. Nettleship wrongly regards every case of hemianopia as symptomatic of cerebral disease, and does not recognize the functional form. The condition is by no means rare, but its onset is so unexpected, its continuance so brief and its most interesting symptoms so fugacious, that the patient fails to note and the physician to discover one of the most suggestive of morbid phenomena, while brief allusions in the text-books, and scanty notices in the medical journals are all that the most painstaking industry can unearth from the written record.

REPORT OF THE RECENT EPIDEMIC OF SMALLPOX IN HARDWICK, VT.

DR. S. E. DARLING, Hardwick, said the recent epidemic was started in the person of a lawyer just returned from Arizona, where the disease was prevailing. He arrived May 25, and went about through the streets and places of business until the evening of May 27. A diagnosis of smallpox was made. He was quarantined until May 30, when a consultation resulted in a diagnosis of varicella by a majority present, and the quarantine was raised. June 8, two cases broke out, and between June 26 and July 1, eight cases more. A modified quarantine was instituted, and on July 31 the State Board of Health officially pronounced the disease smallpox. Much difference of opinion prevailing among physicians and others, Dr. George Henry Fox, of New York City, was sent for. He came, saw all the cases, and pronounced the disease smallpox. A detention hospital was established one mile from the village, and all cases able to be moved were taken there. From July 25 till 31 no new cases appeared. From July 31 till August 16 there were twelve new cases, making thirty-four in all, thirty-three of the discrete and one of the confluent form. All cases recovered.

(To be continued.)

New York Academy of Medicine.

Stated Meeting, Oct. 25, 1900.

Dr. J. Riddle Goffe in the chair.

ANALGESIA PRODUCED BY MEDULLARY INJECTIONS OF COCAIN IN OBSTETRICS.

DR. S. MARX read this paper. He said that, in obstetrics, he had yet to record a failure with this method of inducing anesthesia. The only two dangers are sepsis and cocain poisoning. None of his cases had shown any true evidence of cocain poisoning. They had, it is true, exhibited certain symptoms which might have been taken as an indication of its toxic action, but that they were not had been proved by the fact that the same symptoms had been noted in control tests in which no cocain had been used; hence, they were due to spinal shock. As the symptoms of cocain poisoning are those of cerebral anemia, and as there is likely to be cerebral congestion during parturition, it is not reasonable to suppose that parturient women would prove specially susceptible to the toxic action of cocain. Many patients suffer from intense headache after medullary analgesia. This can be avoided in many instances by giving the patient 30 or 40 grains of bromid about two hours before the operation. When the parturient woman has become completely anesthetized there is no longer any spontaneous bearing down, but if she is instructed to bring her abdominal muscles into play in order to assist the expulsion of the child, she does so as vigorously as when not anesthetized. He has done versions and forceps extractions in women so anesthetized. The method is effective and safe for both mother and child, though failures will sometimes occur most unexpectedly.

SOME OBSERVATIONS ON MEDULLARY ANALGESIA.

DR. S. ORMOND GOLDAN presented in this paper a report of his observations in 20 cases of general surgery. He recommends the use of an attenuated needle of 14-karat gold. It should have a short bevel. The puncture should be made between the fourth and fifth lumbar vertebræ, and not more than one centimeter to the outside. Vomiting had occurred in about half of the cases, and usually more or less profuse perspiration. About half of the patients had suffered from headache, and two had exhibited more or less persistent rigidity of the muscles of the back and head. In one obstetrical case there had been toxic symptoms. The individual susceptibility of the patient to cocain must be determined just as with morphia. He believes intraspinal cocainization will take its place in surgery, but will be restricted to those cases in which general anesthetics can not, or should not, be administered.

MEDULLARY INJECTION IN GYNECOLOGY.

DR. J. RIDDLE GOFFE read a paper on this subject which will be published later.

DR. A. PALMER DUDLEY said that from an experience with this form of anesthesia in six cases he is far from enthusiastic about it. Two very disagreeable features in his cases had been the involuntary evacuations of the bowels and retching and vomiting. The headache which most of these patients experience seems to be worse than the distress after ether or chloroform. Moreover, the period of anesthesia had been of very variable duration, ranging all the way from 32 minutes to 2 hours and 39 minutes. There was almost always a rise of temperature within an hour. The method seemed to him better adapted to obstetrics than to general surgery.

DR. HENRY C. COE described a typically successfully case. The woman, a hospital patient "without nerves," had been subjected to an abdominal section, and had chatted glibly during the whole time. Her condition had been so bad that he felt etherization would have been very dangerous.

DR. EGBERT H. GRANDIN described his unfortunate experience with the method in two cases. They were both absolute failures, though the injections had been given by Dr. Marx. He thought the less we exploited this method the better. The danger of sepsis was an ever-present one. It was well to bear in mind that there was reason to believe that the method was not only uncertain, but that it had already claimed some victims. Two gentlemen who had been at the International Medical Con-

gress had separately and independently assured him of the correctness of the following remarkable statistics, namely: One hundred cases of lumbar puncture with 5 deaths, and anesthesia secured in only 17 per cent.

DR. J. BION BOGART described his experience with this new form of anesthesia in 25 cases, covering fairly well the field of general surgery. Since he had made it a rule always to get a fluid tap, and to make the puncture between the third and fourth lumbar vertebræ, and had boiled the cocain for only two minutes, he had had no failures.

DR. MARX expressed regret that Dr. Grandin should have placed on record those remarkable figures, vouched for only by two unknown persons. What was wanted now was information concerning failures and complications. He thought Dr. Goldan used too large doses of cocain.

DR. GOLDAN said that he had tried to make his observations uniform by using always 20 minims of a 2 per cent. solution of cocain. In one case he had made the puncture between the fourth and fifth, and again between the third and fourth lumbar vertebræ, but had failed to induce anesthesia. A few days later, a secondary operation being required, he had had no difficulty in securing complete anesthesia. He had tried to report his cases just as they had occurred, giving failures as well as successes.

Chicago Pathological Society.

Regular Meeting, Oct. 8, 1900.

President Ludvig Hektoen in the chair.

MILK-SUPPLY.

DR. S. E. MUNSON, Springfield, Ill., read this paper, discussing in particular the relation between milk-supply and tuberculosis. The recent literature bearing on the subject was discussed, and the use of tuberculin and the slaughter of cows giving a reaction were advocated.

DR. EVANS spoke of the various measures advocated for the elimination of tuberculosis from herds of cows, and concluded by advising the killing of all tuberculous cows, as has been urged by Virchow.

DR. GEHRMANN referred to the measures taken by the Chicago Health Department relative to the detection of tubercle bacilli in milk. The examination of a general milk-supply for the bacilli has been discontinued, and only the milk from individual cows is tested. The use of tuberculin is always recommended in any case where suspicion is aroused, in preference to the examination of the milk. The detection of pus in milk is considered sufficient evidence on which to condemn it, even in the absence of tubercle bacilli.

GLIOMA OF RETINA.

DR. BROWN PUSEY demonstrated specimens of a glioma retinæ. The present agitation of the subject of glioma of the retina undoubtedly is due to the article of Flexner, published in August, 1891, and to the book of Wintersteiner, Das Neuroepithelioma der Netzhaut, published in 1897. In these publications particular attention is paid to the "rosettes" found in such tumors. Wintersteiner described the rosette as composed of cells derived from the neuro-epithelial layer of the retina; the wall of the central cavity of the rosette, he considered corresponded to the external limiting membrane of the retina, with rudimentary rods and cones projecting into the central cavity. Flexner and Wintersteiner, working independently came to similar conclusions, and from these studies suggested the name neuro-epithelioma retinæ to replace the term glioma retinæ. These conclusions have been accepted by many authorities; others have opposed them.

DR. M. HERZOG agreed that the tumor consisted of glia cells, and that if blood could be demonstrated in come of the spaces, the picture would correspond to a glioma of the central nervous system.

CASTRATION TUMORS IN SWINE.

DR. H. DUNCAN stated that there is a disease of swine characterized by a tumor or growth, which as a rule appears after castration, occupying the position of the testicle. Similar growths occur, however, in other situations and in the female, usually on the breast. A trauma of some kind invariably occurs previous to the appearance of the growth. The clinical history of the disease is briefly as follows: About two weeks after castration, at the seat of the castration wound, a swelling appears. The tumor as a rule grows rapidly and in from three to five weeks one or more ulcers appear in the cicatrix. Close inspection shows the ulcers to be the external openings of fistulous tracts from which there is a constant discharge of purulent material; the discharge may be intermittent. Not infrequently the growth acquires enormous proportions as compared with the weight of the animal, and in such cases may drag upon the ground. During the early stages the animal thrives, later it becomes cachetic, loses flesh and dies about twelve months after the inception of the growth.

The histology of the growth is uniform and corresponds to the macroscopic appearance, namely a structureless, necrotic center with an enclosing zone of scar tissue. In sections stained for bacteria the necrotic border is seen to contain numerous organisms, sometimes in enormous numbers. There may be bacilli of varying lengths, threads and cocci. The threads stain uniformly or appear as strings of deeply staining spores or cocci. Some of the threads branch. The disease is not infrequent among the swine herds of Iowa, Kansas and Missouri.

Cleveland Medical Society.

Regular Meeting, September, 28, 1900.

President Dr. Henry S. Upson in the chair.

SMALLPOX OF THE PRESENT EPIDEMIC.

DR. MARTIN FRIEDRICHS noted that while many cases are very mild, and some of them difficult to recognize, yet that others occur which answer perfectly to the old classic description of the disease. A century of vaccination has established a partial immunity by inheritance, even in those who have not themselves been vaccinated. Another potent cause for the mildness of the disease is the use of the antiseptic method, whereby secondary infection of the skin lesions is usually avoided. While the disease is contagious, he did not think that it was highly so, as he had never seen it spread from house to house unless the people visited back and forth. In one apartment house with four families on one floor, three who had visited each other frequently contracted the disease from one case, while the fourth, which did not associate with the other three, entirely escaped. He had noticed that children who play about the floor seem to contract the disease more readily than adults, and the same is true of the women who scrub the floors in infected rooms. The sudden rise of temperature with headache and backache, followed by the eruption, along with which the temperature falls, make the diagnosis clear. He had seen a number of cases that began with severe initial symptoms in which the disease was afterward very mild, only four or five pocks appearing. In the time of an epidemic every pimple should be looked on as suspicious, if its appearance has been heralded by fever. He gave clear directions for differentiating smallpox from measles, chicken-pox and other eruptive diseases.

DR. O. T. MAYNARD, Elyria, reported a case of long duration, with moderate fever, some disturbance of the general health and successive crops of vesicular eruptions, which had been very difficult to diagnose.

DR. G. SEELEY SMITH asked what the essayist thought of red light in the treatment of smallpox. He had seen a report of 17 cases treated with marked success in Stockholm by this method.

DR. H. W. ROGERS said that the point he relied on chiefly in diagnosing smallpox from chicken-pox was that, in the former, eruption appeared at once all over the body, while in the latter it appears in groups. Speaking of the case reported by Dr. Maynard, he said that the pulse was not characteristic of typhoid, being too rapid, and also that the eruption was too late. He thought the case was one of auto-infection from the intestines.

DR. JOHN L. HESS said that during two years, while serving

as health officer, he had seen some 275 cases of smallpox, and that in a very large proportion of them it was impossible to make a diagnosis in the early stages. Many cases at the onset resemble la grippe. He thought that mistakes were almost certain to arise.

DR. C. L. WEBSTER said that, particularly in children, he had noticed early in cases of smallpox a bright-scarlet rash over the lower abdomen and inside of the thigh.

DR. J. T. SMITH said that the smallpox of to-day must be very different from that of forty years ago, if there is any difficulty in making a diagnosis. While in charge of a smallpox hospital during the Civil War he had not seen cases in which there was any question of diagnosis. The confluent cases that he had seen at that time were very severe, although the mortality was low.

DR. N. C. YARIAN said that he had had a case of undoubted smallpox without the typical eruption. In this case the papules developed a week after the disease began and came in successive crops. They were first vesicular and then pustular. The diagnosis was doubtful until other members of the family contracted the disease.

DR. W. E. HART, Elyria, in speaking of Dr. Maynard's case, said that while the pustules looked like smallpox, although they were very small, yet the fact that the fever continued after their appearance led him to exclude smallpox. The case was not isolated and no cases of smallpox arose from it.

DR. CHARLES J. ALDRICH said that it was reported that for the last few years there has been an epidemic of smallpox among the negro cotton-pickers in the South, so mild that many of them have not been confined to the house for a single day. In connection with these cases of smallpox, persons who subsequently handled the bales of cotton coming from the same district contracted the disease. He had seen one case, a boy of 8, recovering from mild scarlet fever, in which there suddenly occurred convulsions and high fever, accompanied shortly by smallpox eruption. This child was completely aphasic for three months, but has recovered.

DR. FRIEDRICHS, in closing, said that the diagnosis was absolutely certain and there should be no doubt in any case. He said we did not have to wait until pustules appear.

DR. WILLIAM H. HUMISTON reported a case of left tuboovarian abscess containing a diplococcus closely resembling the gonococcus, and also the colon bacillus. He also reported a case of right pyosalpinx.

SUPPURATIVE CHOLELITHIASIS.

DR. GEORGE W. CRILE reported this case. The patient for two or three weeks had had attacks of pain, both in the right and left sides, and later the right side became perceptibly tender. There was marked leucocytosis and a diagnosis of gallstones was made. At operation the gall-bladder was found to be so elongated that it extended down to McBurney's point, and was very slender. The tip of the gall-bladder was much distended, and a gall-stone was found therein. It was wedged so tightly as to require crushing before it could be removed. One physician who had seen the case had been misled by the fact that early in the case the pain had been chiefly on the left side. This case showed that there might occasionally be considerable difficulty in diagnosing a case of appendicitis from disease of an elongated gall-bladder, and that pain on the left side does not exclude disease of the gall-bladder.

American Public Health Association.

Twenty-eighth Annual Meeting, held at Indianapolis, Oct. 22-26, 1900.

(Concluded from p. 1171.)

TEACHING OF HYGIENE AND GRANTING OF DEGREES OF DOCTOR OF PUBLIC HEALTH.

DR. WYATT JOHNSTON, Montreal, compared methods of hygienic instruction in vogue in the United States and in foreign countries, with the result that the showing was decidedly favorable to the foreign countries. He inveighed strongly against the looseness of methods in this country by which men are able to secure positions as health officers or as members of boards of health without having the necessary qualification. Dr. Johnston urged the Association to consider this matter and endeavor to arrive at some standard for a purely hygienic education.

DR. L. P. JONES, Greenwich, Conn., outlined the following scheme for preventive medicine: 1. The endowment of a chair of preventive medicine in each of the leading medical colleges of the country. 2. The establishment of an institute, the members of which should be the incumbents of these chairs. 3. An award of prizes by this institute for essays and discoveries of special merit in sanitary science. 4. Establishment of fellowships for a limited number of advanced students.

DR. JUAN BRENA, Zacatecas, Mexico, dealt with the vice of smoking among youths and offered suggestions as to the means of overcoming it.

REPORT OF THE COMMITTEE ON DISINFECTION.

PROF. F. C. ROBINSON, Brunswick, Me., presented the following conclusions: 1. Household disinfection after infectious diseases should combine the use of formaldehyde with other means. It can be safely relied on for all exposed surfaces, and these only. 2. Formaldehyde requires moisture enough in the air to nearly saturate it for its most efficient working. 3. There is much disagreement among experimenters as to the disinfection of tuberculous matter. One says a 2 per cent. solution of formaldehyde disinfects it; another, that even a 10 per cent. solution does not. Several say that formaldehyde gas applied as above destroys it; others deny this. Further experiments are needed. 4. Soap is a poor disinfectant, but 1 per cent. caustic alkali, or 20 per cent. carbonate of alkali is efficient. 5. Carbolic acid, less than a 5 per cent. solution, has little scientific value. 6. The creosotes, as used in creolin, lysol and solutol, are safe disinfectants. 7. Alcohol at from 50 to 75 per cent. has considerable disinfecting power, but not at other strengths. 8. Most metallic salts, except those of mercury, have little disinfecting action. 9. Bichlorid of mercury should be used in strength at least 5 to 1000 if tuberculous matter is to be disinfected. A fresh solution is more active than one which has stood for some weeks. The addition of salts does not increase the strength of a fresh solution, but prevents it from losing its strength as rapidly. 10. Bright sunlight kills the tubercle bacillus in a few hours, and, as a rule, pathogenic bacteria keep their greatest virulence only when kept in the dark.

DR. JESUS CHICO, Guanajuato, Mexico, gave some hints about malaria from personal observations, in which he did not think the mosquito was as important a causative factor as had been attributed to it in distributing malaria, but in Mexico he thought the injudicious use of tropical fruits played an important rôle.

REPORT OF THE COMMITTEE TO DEFINE WHAT CONSTITUTES AN EPIDEMIC.

DR. BENJAMIN LEE, Philadelphia, read this report. In the minds of the public at large, and of many of the profession, the word epidemic still conveys an idea of universal atmospheric contamination. This is to be deplored, because, while on the one hand its use inspires an indefinable horror and creates panic, on the other hand it leads to the disregard of the very precautions which are of essential use in restricting the spread of the contagion, namely, those which should be taken in regard to the person and the excreta of the patient, his effects and his immediate environment.

In view of changed views as to the propagation of communicable diseases, the word epidemic has outgrown its usefulness. It has become the means of perpetuating false conceptions, and its official use may be misleading and mischievous. Without attempting any stricter, more comprehensive or more lucid definition of this word, the committee recommended that, as opportunity occurs in all laws and regulations in which certain executive action is made contingent on the declaration by health authorities of the existence of an epidemic, the phraseology shall be altered by omitting the word epidemic, and in place thereof inserting a brief statement of the condition calling for such action, as, for example, "whenever a communicable disease prevails to such an extent, or is

spreading with such rapidity as in the opinion of the board to make it its duty to notify either the general public or the authorities of neighboring towns of the fact that such and such action shall be taken." The report of the committee was adopted, and the committee discharged.

REPORT OF THE COMMITTEE ON NATIONAL LEPER HOME.

DR. H. M. BRACKEN, Minneapolis, chairman, presented this report. The committee dealt with the desirability of establishing national leprosaria in the United States. The records of Dr. Bracken, for certain states, were compared with those of Dr. Hyde. He presumes that Dr. Hyde's figures for Iowa and Wisconsin, 20 each, are estimated. Probably they are not too high. He has taken only those cases of which a history could be given. It is probable that the 120 cases credited to Minnesota are taken from Dr. Hansen's report. It seems to him that this, too, must be an estimate. If there were 120 cases in Minnesota, the speaker can not understand why they are not on his records of 61. If there were that many cases in 1888, the number for Minnesota is much higher than he has given, for many of the cases in the official list can not have possibly belonged to Dr. Hansen's 120. It might appear from the report of cases in the Northwest that leprosy was far more common in Minnesota than in the neighboring state. He can see no reason for this belief, for the lepers in this district are among the immigrants from Norway, Sweden, Iceland and China. These people have quite a representation in all this group of states. He can only attribute the more complete returns for Minnesota to the fact, 1, that there has been less agitation against leprosy in this than in some of the neighboring states; 2, that with this lack of agitation against leprosy physicians report their cases more willingly to the state board of health, which has endeavored during the last twenty years to palliate the sufferings of this unfortunate class; 3, that Minnesota is fortunate in having among its physicians men who are familiar with leprosy, and who are interested in philanthropic work, and these physicians have given material aid to the state authorities engaged in securing a list of all lepers in Minnesota. Several lepers in the Minnesota list give the history of a previous residence in Wisconsin, but their names in not a single instance appear on the Wisconsin records. Of the 37 living lepers known to be resident in the Northwest, 17 only are in Minnesota, and there is a strong possibility of 2 of these being dead, but he has no positive knowledge of the fact. He does not dwell on these facts as an alarmist, but simply reminds the Association that leprosy has existed, does exist, and will continue to exist for years to come in all three countries represented in the Association.

A leprosarium should afford a comfortable home for lepers. This means, not only good buildings, but extensive grounds comprising many acres, where the lepers may have liberties and still be in exclusion. The buildings connected with the leprosarium must combine the privileges of a home and of a hospital. Those who have the disease in mild form may need little if any medical care. They need comfortable clothing and good food. With those in whom the disease is more advanced, the care should be that of a hospital patient, with medicines to lessen their suffering and dressings that would commend themselves to any surgeon. A leprosarium should resemble modern colonies for epileptics. It should furnish employment for those who are able to work, and amusement of various kinds for all. Two of the strongest medical societies in Minnesota have placed themselves on record as favoring the establishment of a national leprosarium, also the American Dermatological Association has appointed a committee to determine the best methods to be used in the care of lepers.

By resolutions the Association placed itself on record as favorable to the establishment of national leprosaria.

DR. JOHN H. S. FULTON, Baltimore, described a suitable dress for defense against infectious diseases.

REPORT OF THE COMMITTEE ON ANIMAL DISEASES AND ANIMAL FOOD.

DR. D. E. SALMON, Washington, D. C., chairman, urged the importance of careful observations being made of glanders, in view of the fact that serum for use in the treatment of many human ailments is obtained from horses. Army horses are peculiarly liable to contract the disease in time of war, on account of the extra exertion and frequent lack of full rations during such periods. He criticized the government for not provided skilled and trained veterinarians in the army. He discussed the subject of hydrophobia, and emphasized the importance of active measures looking to the extermination of this disease. He cited statistics of many outbreaks of rabies, and showed the disease to be peculiarly virulent and almost invariably fatal to human beings. Misguided people, who declare there is no such thing as hydrophobia communicated to man from animals, were sternly rebuked. Dr. Salmon declares that their obstructive tactics have wrought incalculable harm in the way of deceiving people into a careless attitude toward this malevolent disease. The Pasteur treatment was highly commended by the committee, which also recommended that the Association take steps to enlighten the public on the disease and its treatment, as well as means for its prevention.

TUBERCULOSIS.

The committee made strong recommendations on the subject of tuberculosis, asserting its belief in the theory that the disease can be and is communicated from infected cows through their milk. Here also the committee encountered learned men who controverted the theory, asserting that the difference in appearance of the bacillus of human tuberculosis and that of bovine indicates that the latter can not communicate the disease to human beings. Bovine tuberculosis is undoubtedly communicable. He inveighed against loose methods prevailing in many creameries by which the milk received from an infected herd is mixed with the general supply of milk on hand; and further, the practice of distributing, without previous sterilization, the waste milk and cream to be used as food for swine was condemned.

President Bryce added a few vigorous utterances on the subject of the care which ought to be employed in dairies to guard against the distribution of milk infected with tubercle bacilli.

DR. R. M. WOODWARD, Washington, D. C., gave a résumé of the recent foreign work of the Marine-Hospital Service.

DR. F. F. WESBROOK, Minneapolis, reported, on behalf of the Committee on Transportation of Diseased Tissue by Mail, recommending that nose and throat specimens be included in one package.

DR. CRESSY L. WILBUR, Lansing, Mich., presented the report of the Committee on Demography and Statistics in Their Sanitary Relations. He mentioned the progress that has been made in matters relating to vital statistics concerning which the Association had acted in the past. He urged the Association to stand for united and determined action in elevating the standard of registration laws in this country, and in insuring the practical success of new laws when enacted.

The following resolutions were introduced, discussed and adopted:

1. RESOLVED, That the Association, recognizing the benefits of medical school inspection, heartily approves the efforts of boards of health and of education directed toward the establishment of systems of inspection. (Offered by Dr. Adolph Gehrmann.)

2. RESOLVED, That the Association approves of and encourages all efforts made by governments, whether national, state or municipal, for the limitation of pollution of streams. (Offered by Mr. C. Monjeau.)

3. RESOLVED, That a committee of three be appointed, to be known as the Committee on Uniform Municipal Statistics, to take such steps as may seem practicable toward securing greater uniformity in all branches of municipal accounts, reports and statistics, and particularly those branches relating to vital and sanitary statistics; said committee to have power to confer with similar committees from other societies already or hereafter appointed to the same general end, and to report at the next meeting of the Association. (Offered by Dr. Leal, of Paterson, N. J.)

SECTION ON BACTERIOLOGY.

The Section on Bacteriology and Chemistry met at the Pathological Laboratory of the Central Hospital for the Insane, Dr. Theobald Smith, Boston, in the chair.

TUBERCLE BACILLUS IN MILK.

DR. H. L. RUSSELL, Madison, Wis., showed the degree of heat which is necessary to destroy the tubercle bacillus in milk without injuring, commercially, the value of the milk. He also read the report of the committee on the bacteriology of milk in its sanitary relations. As illustrating the peculiar way by which such germs find their way into milk, an incident occurring in an hospital at Leeds, England, was related. The nurses in that institution were in the habit of taking glasses of milk from the pantry up into the sick wards several hours before the milk was drunk. An outbreak of typhoid fever occurred among the nurses. Investigation disclosed the practice to which they had been resorting, and when it was ordered discontinued, the epidemic subsided.

DIPHTHERIA DUE TO MILK.

DR. V. A. MOORE, Ithaca, N. Y., related a diphtheria epidemic started in that city from milk delivered by a dairyman whose family had suffered from acute tonsillitis. The eldest son, who attended to the milking of the cows, has been pronounced well and resumed his regular work, but scientific investigation demonstrated that he still had germs of the disease in his system.

The following officers were selected for the ensuing year: President, Dr. Benjamin Lee, Philadelphia, Pa.; first vice-president, Mr. Rudolph Hering, New York City; second vice-president, Dr. J. N. Hurty, Indianapolis; secretary, Dr. Charles O. Probst, Columbus, Ohio; treasurer, Dr. Henry D. Holton, Brattleboro, Vt.

Buffalo was selected as the place for holding the next annual meeting. The executive committee recommended that the time be fixed during the third week in September, 1901.

Therapeutics.

Spasmodic Cough in Bronchitis.

R.	Codeinæ	gr. v	3
	Acidi hydrocyanici dil.	m. xl	1 66
	Acidi phosphorici dil	℥i	4
	Syrupi tolutani	℥ii	64
	Aquæ, q. s. ad	℥iv	128

M. Sig. One teaspoonful every three or four hours.

Alkaline Diuretic Mixture.

R.	Potassii acetatis		
	Potassii citratis		
	Potassii bicarb, āā	℥v	20
	Aquæ, q. s. ad	℥viii	256

M. Sig. One teaspoonful every three or four hours.

—*Merck's Report.*

Herpes Zoster Costalis.

The following is given for relieving the pain and preventing rupture of the vesicles.

R.	Ichthyol		
	Magnesii carbonatis		
	Zinci oxidi, āā	℥ii	8
	Aquæ, q. s. ad	℥iv	128

M. Sig. Spread over the affected part and cover with a bandage to prevent rupture by friction. —T. G. Lusk.

Earache.

R.	Chloralis—camphorated	℥i	4
	Glycerini	℥i	32
	Ol. amygdalæ dulcis	℥iiss	10

M. Sig. Saturate a piece of cotton and introduce well into the ear.

Chilblains.

R.	Ichthyol		
	Resorcin		
	Tannin, āā	gr. x	66
	Aq. camphoræ	℥i	32

M. Sig. Apply locally two or three times a day.

Bronchitis in Children.

Solis-Cohen uses counterirritation to the chest, inhalation of creosote or formalin, calomel gr. 1/4 when needed and:

R.	Tinct. aconiti	m. i	06
	Tinct. opii camphoratæ	m. ii	12
	Vini ipecacuanhæ	m. v	33

M. Sig. At one dose, to be repeated every two hours. He states that alcohol or quinin does but little good.

—*Med. News.*

Intestinal Antisepsis in Children.

R.	Benzonaphthol	gr. xii	72
	Bismuthi salicylatis	gr. xxiv	1 5
	Bismuthi subcarbonatis	gr. xviii	1 2

M. Ft. chartulæ No. xii. Sig. One powder every two hours for a child six months old.

As a Diaphoretic.

R.	Pulv. camphoræ	gr. 1/3	02
	Pulv. opii	gr. 1/2	03
	Potassii nitratis	gr. iii	20
	Sacchari	gr. iss	10

M. Ft. chartula No. 1. Sig. To be taken at bedtime in hot tea. —*Münch. Med. Woch.*

Facial Erysipelas.

R.	Guaiacol—crys. synthetic		
	Menthol, āā	gr. xv	1
	Olei camphorati	℥i	32

M. Sig. Apply to the affected area every two hours.

—Desesquelle: *N. Y. Med.*

R.	Acidi carbolici		
	Tinct. iodi		
	Alcoholis, āā	℥i	32
	Olei terebinthinæ	℥ii	64
	Glycerini	℥iii	96

M. Ft. solutio. Sig. Paint the affected part every two hours and cover with gauze. —*La Presse Méd.*

A Compound Hepatic Pill.

R.	Pulv. ipecacuanhæ	gr. 1/3	02
	Pulv. piperis nigri	gr. i	06
	Sodii bicarbonatis		
	Massæ hydrargyri, āā	gr. iii	2

M. Sig. One such pill every two hours after supper until three have been taken, followed in the morning before breakfast by a saline purgative.

—*Phil. Hosp. Form.*

Tinea Tonsurans (Barber's Itch.)

R.	Ichthyol	gr. xx	1 33
	Sulphuris precip.	℥i	4
	Bismuthi formic-iodidi	℥ss	2
	Petrolati—benzoinat	℥i	32

M. Sig. Apply locally three times a day.

—Buchanan: *Med. Sum.*

Treatment of Hysteria.

Dr. R. S. Carroll, in the *Medical Mirror*, outlines the following treatment for hysterical conditions, which must be modified to suit the individual case: Moral and hygienic influence; the cold shower daily; strychinin nitrate hypodermically daily, and a mixture similar to the following:

R.	Ext. cascaræ sagradæ fluidi	℥i	32
	Ext. apii graveolentis fluidi	℥ii	64
	Tinct. nucis vomicæ	℥vi	24
	Tinct. asafœtidæ	℥viii	256

M. Sig. One-half to one teaspoonful in water before each meal. — *N. Y. Med. Jour.*

This contains stomachic and laxative properties of cascara, the celery and nux nerve tonic, and the antispasmodic asafœtida.

Acute Diarrhea.

R.	Tannalbin	℥iss	6
	Pulv. opii	gr. ii	12
	Bismuthi beta-naphtholati	℥i	4

M. Ft. chartulæ No. xii. Sig. One every two hours.

Tannalbin is a reddish-brown powder and is a compound of tannin and albumin and is decomposed only by alkaline secretions of the intestines.

A Varnish for Replacing Collodion.

The *Phila. Med. Journal* reports the following antiseptic combination, taken from *Jour. des Practiciens*:

R.	Thymol	gr. xxiv	1.5
	Balsam tolutani	gr. lxxx	5.33
	Pulv. gum lac	ʒxv	60
	Alcoholis—90 per cent.	ʒviss	26
	Etheris	ʒxiii	52

M. Ft. solutio. Sig. To be used as a substitute for collodion.

Ointment for Acne, Pimples or Blackheads.

R.	Resorcini	gr. i	.06
	Betanaphtholi Camphoræ, āā	gr. xii	.75
	Cretæ precip.	gr. xv	1
	Sulphuris precip.	ʒiss	6
	Vaselini	ʒi	32
	Lanolini, q. s. ad	ʒii	64

M. Sig. Bathe the face in hot water, followed by a thorough rubbing with a rough towel, then apply the ointment. Use night and morning.

Ptyalism.

R.	Tinct. myrrhæ	ʒi	32
	Potassii chloratis	ʒvi	24
	Aquæ camphoræ, q. s. ad	ʒxvi	512

M. Sig. Shake. Use as a mouth wash every two or three hours to check secretions and harden the gums in mercurial ptyalism. —*Dominion Med. Monthly.*

Croup.

R.	Chloralis	gr. lxxv	5
	Potassii bromidi	gr. xlv	3
	Ammonii bromidi	gr. xxx	2
	Aquæ cinnamomi	ʒii	64

M. Sig. One teaspoonful and repeat in twenty minutes if not relieved. —Joseph Holt.

Injection in Gonorrhea.

R.	Menthol	gr. 1/3	.02
	Acidi salicylici	gr. iss	.09
	Acidi carbolici Acidi lactici Ol. eucalypti		
	Methyl salicylatis, āā	gr. iii	.18
	Resorcini	gr. viii	.5
	Aquæ destil	ʒiii	96

M. Sig. Use as an injection twice daily.

Pousson has used the above with excellent results, stating that the principle of mixing several antiseptics gives better results than can be derived from any single one in a strong solution.

Chronic Pharyngitis.

Dr. Saviore, in *Merck's Archives*, outlines the following treatment:

Wash out the nasopharynx night and morning with an antiseptic solution containing carbolic acid, salicylic acid and menthol; then inhale the following mixture for five minutes:

R.	Formalin	m. i	.06
	Menthol	ʒiiss	10
	Chloroformi	ʒiss	6
	Eau de Cologne	ʒiiiss	112

M. Sig. Use as an inhalation night and morning.

And touch up the nasopharynx with the following:

R.	Menthol	gr. xv	1
	Tinct. iodi	m. lxxv	5
	Glycerini	ʒiiss	10

M. Sig. Apply locally by means of an applicator.

Tobacco Heart.

R.	Adonidin	gr. 1/10	.006
	Ammonii carbonatis	gr. ii	.125
	Camphoræ	gr. ss	.03

M. Sig. At one dose three times a day.
—Stern: *Merck's Archives.*

A Good Diuretic Mixture.

R.	Potassii citratis Tinct. hyoscyami, āā	ʒi	32
	Aquæ, q. s. ad	ʒiii	96

M. Sig. One teaspoonful three times a day as a diuretic.
—Bellevue Disp.

To Disinfect the Skin After Scarlet Fever.

R.	Calcii hypochloritis Sodii carbonatis, āā	ʒiii	12
	Aquæ, q. s. ad to make paste.		

M. Sig. Apply locally.

H. R. Hopkins states that he has used the above with splendid results in disinfecting the epithelium after scarlet fever. Nascent chlorin is formed, which is germicidal.

Abortive Treatment of Bubo.

R.	Unguenti hydrargyri Unguenti belladonnæ Ichthyol Lanolini, āā	ʒii	8

M. Sig. Spread on a piece of surgical lint and apply directly to the swollen gland and over this place a piece of oiled silk. Then apply a large pad of cotton and make firm pressure with a spica bandage.

Christian, in *Ther. Gazette*, follows his method and advises his treatment every other day until resolution is accomplished, which usually takes ten days. —Stevens: *Phila. Med. Jour.*

Fetid Bronchitis.

R.	Plumbi acetatis Terpin hydratis, āā	gr. ii	.12
	Pulv. opii et ipecacuanhæ	gr. iss	.09

M. Ft. pilula No. i. Sig. Three or four pills daily.
—Parcelli: *Prog. Médical.*

Dysmenorrhea.

R.	Ergotin	gr. xv	1
	Quininæ sulphatis	gr. iii	.20
	Pulv. digitalis	gr. iss	.10
	Pulv. cocoæ, q. s.		

M. Ft. pilulæ No. x. Sig. One pill three or four times a day. —*Presse Médicale.*

Postpartum Hemorrhage.

R.	Ergotinæ	gr. xvi	1.06
	Syr. aurantii florum	ʒi	32
	Aquæ	ʒiii	96

M. Sig. One tablespoonful every three hours.
—Bonjean: *Kan. City Med. Rec.*

Nutrient Enema After Abdominal Sections.

R.	Lactis—peptonized		
	Spts. frumenti, āā	ʒi	32
	Whites of two eggs		
	Sodii chloridi	gr. xxiv	1.5

M. Sig. Irrigate the rectum thoroughly with a warm normal salt solution, then give the enema by means of rectal tube or rubber syringe. —Hunter Robb.

The *American Therapist* contains the following therapeutic measures other than medicaments as given by Johnson in the *Therapeutic Gazette*:

1. Instead of pilocarpin, which is dangerous, use the hot pack, steam or vapor bath, or hot-air bath, in beginning influenza or threatened eclampsia.

2. Instead of atropin and camphor or belladonna ointment to "dry up" the secretion of milk, bandage the breast and massage.

3. Instead of giving opium in acute pleurisy, strap the affected side.

4. Instead of giving ergot for hemoptysis, try intermittent cold applications, sucking of ice, dry cups to the chest and absolute rest and morphin.

5. Instead of rectal injection of chloral and the giving of bromids for convulsions in infants, try cold to the head, the warm—not hot— bath, the mustard pack or mustard foot-bath, flushing of the bowels or enema. Of course remove the cause if possible. Pressure on the carotid and absolute rest.

6. In threatened abortion plug the vagina.

7. In postpartum hemorrhage pack the vagina with plain sterilized gauze.

Rest in many diseases greatly aids in the restoration of health, absolute if possible, but even comparative rest will do very much.

Marfan, in *Jour. de Méd. de Paris*, considers lactation a contraindication to the following drugs: Opiates, atropin, hyoscyamus, colchicum, arsenic, cocain, chloral, lead salts which are precipitated by milk, digitalis, ergot, antipyrin, the last three only relatively.

Medicolegal.

Disclaiming to be an Expert Not a Disqualification.—Where the testimony of a witness shows him to be an expert in the matter concerning which he gives his opinion, his testimony, the Court of Appeals of Kansas holds, in the case of Walker vs. Scott, is properly received as that of an expert, although he, for some unexplained reason, disclaims being such.

Compelling Excessive Intercourse Warrants Divorce.—The specifications, in the suit of Gardner vs. Gardner for a divorce on the ground of cruel and inhuman treatment on the part of the defendant, were that he was a man of inordinate lust, to which by threats he compelled submission, which had seriously impaired her health. The chancellor, however, refused to permit her to testify to the treatment of her husband in forcing her to submit on the ground that such an inquiry would be against public policy. He also refused to permit another witness to prove conversations had with the defendant husband on the subject. The Supreme Court of Tennessee holds that both of these rulings were erroneous.

Mental Incapacity to Set Aside Deed.—The first appellate division of the Supreme Court of New York says, in the case of Hoey vs. Hoey, that a person who seeks to have a deed set aside on the ground of mental incapacity in the grantor when he executed it has the burden of showing that, at the time the act sought to be avoided was executed, the disease had reached such a stage as to so seriously impair the mind that the capacity to make a valid disposition of property did not exist. The law, the court goes on to say, recognizes that persons suffering from mental disease may make valid contracts or deeds or wills. If, at the time of the execution of the instrument sought to be avoided, the mental condition was such that the act was the intelligent act of the individual, based on his intelligence and rational judgment, with sufficient mental power to understand the nature of his property and his relations to those who would be the subjects of his bounty, and without prompting to arrive at a determination as to what disposition he wished to make of it, the court is not justified in declaring such disposition invalid. Much more is required than merely to show that the grantor or testor was suffering from a mental disease. There must, the court holds, be satisfactory evidence that the disease had progressed to such an extent that his capacity to contract was impaired.

Province of Boards of Insanity.—The Supreme Court of Oklahoma holds, in the case of Maass vs. Phillips, that an order of a board of insanity adjudging one to be insane has no bearing on his legal mental status. The effect of such an order, it says, is to admit one to the territorial asylum for treatment; and it is not entitled to the faith and credit of a judgment of a court, as the members of such board do not act as judicial officers, but as a special board, clothed with special power only. Again, the court says that such an order amounts to no more than the expression of an opinion by any other person or persons out of court as to the mental condition of a defendant's mind, except where the right of the officers of the asylum to confine and treat such person is called in question, or in other cases of a kindred character which fall within the spirit of the law authorizing such finding by the board of insanity. The boards of insanity are special boards created by law for a special purpose. It was only intended to clothe them with the power to determine who should be confined in the territorial asylum for treatment, and they have not the power to fix one's legal status (that is, to declare one to be, in law, sane or insane), and the fact that probate judges are made members of these respective boards changes not the rule. When a probate judge acts in this capacity, he acts as another member of the board, and not as a probate judge or as a probate court. It is the kind of an order adjudging one to be insane which the Oklahoma statutes vest authority in the judge of the probate court to make in certain cases, after a full hearing, sitting as a probate court, the supreme court adds, that the authorities refer to as being entitled to faith and credit, and not to the orders of ordinary boards of insanity.

Communications to Physician in Bastardy Case.—The prosecuting witness and the accused in a bastardy case disagreed as to the date that the first intercourse took place, whether July 15, or August 3. Finally, the latter proposed that witness be examined by a competent physician, and, if the examination disclosed that her pregnancy was of not more than four months' duration, he would regard himself as the author of her trouble and the father of her unborn illegitimate child, and would marry her. This offer was finally accepted, and a reputable physician was agreed on to make the examination. The examination was made, and, in the judgment of the examining physician, it disclosed that the pregnancy was more than six months advanced. To this result of the examination the physician was permitted to testify on the trial. But he was not allowed to testify that during the examination the complaining witness stated to him that the first connection with accused took place, as stated by the accused, on August 3. And this, the Court of Appeals of Kansas holds, case of Clark vs. State, was error. The evidence was excluded on the theory that it was a confidential communication, and therefore incompetent. But a statute making a physician or surgeon incompetent to testify concerning any communication made to him by this patient with reference to any physical disease, or any knowledge obtained by a personal examination of such patient, the court holds, can not be construed to cover such facts as disclosed in this case. The court emphasizes that the physician was not present as the physician of the complaining witness. She was not his patient. The examination was not made for the purpose of treating her for any physical, or supposed physical, disease. She agreed and submitted to the examination for the sole purpose of satisfying the accused as to whether he was the father of the child. She knew that the result of the examination was to be made known to her parents and to the accused before she submitted to it. Under such circumstances, the court holds, statements made by her to the physician during the examination, as to when the first connection took place, could not be regarded as confidential.

Insurance Not Vitiated by Prescribed Use of Drugs.—One of the provisions in a policy of life insurance, which the Supreme Court of Tennessee had to pass upon in the case of the Endowment Rank, Knights of Pythias vs. Allen, was that if the assured's death was caused or superinduced by the use of intoxicating liquors, narcotics or opiates, then only a pro rata payment should be made on the policy. Under this, the trial judge charged the jury, in effect, that, if they found from the evidence that the death of the assured was caused or superinduced by the use of narcotics, opiates, or intoxicating liquors, and should further find that at the beginning of his illness his attending physician had prescribed such narcotics, opiates, or liquors in moderate doses, and that he continued to use the same in moderate doses, under the advice and prescription, but not beyond the directions, of his physicians, such moderate and prescribed use would not be a violation of the rules, regulations, and by-laws of the insurer. He also charged the jury that the insurer was liable on its policy even if it did show by a preponderance of the evidence that the death of the assured was caused by the use of intoxicating liquors, narcotics, or opiates, if the jury likewise believed from the evidence that he took the intoxicants, opiates, or narcotics under the advice of his physician, and in the manner and amounts prescribed by his physician. It was argued that the advice of a physician in the case would be no protection, and that the contract was plain that, if death was caused by the use of narcotics, there could be no recovery. But the view expressed in the instructions stated, the supreme court holds correct, and says is supported by authority. It also holds that witnesses who were not physicians or experts were not competent to give opinions such as that the assured was a wreck "from the use of morphin and liquor," and "that he seemed to be unable to resist the habit longer," or that "he seemed to be a slave to morphin," and that his physical condition was the result of his taking morphin. Moreover, a physician having stated that he prescribed morphin and whisky for the assured, and, in

answer to the question whether he took more than was prescribed, said that he did not know, the court holds that it was incompetent for the witness to add that he "thought he did," this last being a mere conjecture on the part of the witness, and not an opinion based on facts or appearances.

Distinguishes Between Medical and Legal Insanity.—A California statute requires a suspension of the proceedings in a criminal case whenever it is found pending same that the defendant is insane; that he be committed to the state insane asylum, and that the superintendent of the asylum shall send him back as soon as he becomes sane, in order that the court may proceed to trial or judgment in his case. These provisions, the Supreme Court of California says, in re Buchanan, establish nothing new in criminal procedure. They merely put in statutory form a well-known regulation of the common law—a regulation applicable to lunatics or madmen. But here was a man whose trial for murder had been suspended in compliance with these provisions, who was seeking, by habeas corpus proceedings, to be sent back to have his trial proceeded with, when the officers of the asylum strongly insisted that he was not sane, and never could become so. This leads the supreme court to say not only that there is difference, but that it is notorious that there is a difference, between the medical view of insanity and the view on which the statute is founded. And it holds that the question of sanity or insanity in such a case as this is to be determined with reference to the latter, as contradistinguished from the former, view. Continuing, it says that when the rule became a part of the common law, modern views of insanity were unknown. No sort of insanity was recognized except that which manifested itself in mental deficiency or in mental derangement. A congenital idiot or a raving lunatic was understood to be insane, but in the absence of any sensible loss of memory or material impairment of the intellectual faculties a man was counted sane. If he could remember events and could reason logically, he was not within the letter or the reason of the rule which suspended proceedings against a madman or a lunatic because he was disabled by the act of God to make a just defense, if he had one. And, if he was not within the common-law rule, neither is he, the court holds, within the rule of the statute, which merely reenacts the common law, and has no other purpose than to suspend proceedings against a defendant who is by reason of mental infirmity incapable of making his defense. So, here, it orders the man in question returned to the custody of the sheriff, that his trial may be proceeded with on the criminal charge, the evidence all showing him to be in possession of every faculty requisite to the defense of the accusation against him, his insanity being of a character which does not manifest itself in any apparent weakness of intellect or failure of memory, but may be best described as a sort of chronic and latent disease of the brain, which, under the excitement of intoxicating drink, to which he is predisposed, will lead him to the commission of criminal acts. The court adds that, if, being found not guilty and discharged from custody, it is thought he should be put under restraint as a person dangerous to be at large, the law affords the means of having that fact adjudicated in a proper proceeding.

Current Medical Literature.

New York Medical Journal, October 27.

1 Supplementary Report on a Recurrent Tonsillar Tumor. R. P. Lincoln.
2 *"Thimbles" for Massage and Stripping of the Seminal Vesicles. J. Rilus Eastman.
3 *Fractures of the Nose. Thomas Amory De Blois.
4 A Case of Total Eventration. Charles G. Schmidt.
5 Disturbances of Gastric Motility and Their Significance. (Concluded.) Andrew MacFarlane.
6 *The Management of Normal Labor, Including the Use of the Forceps. Austin Flint, Jr.
7 *Effects of Digestion of Food Prepared by the Use of an Alum Baking Powder. E. E. Smith.

Philadelphia Medical Journal, October 27.

8 The Etiology of Yellow Fever. Walter Reed, James Carroll, A. Agramonte, Jesse W. Lazear.
9 *Restitution of the Continuity of the Tibia by Transplantation of the Patella Into an Extensive Osteomyelitic Defect. N. Senn.
10 *Interrelationship Between Cardiovascular Disease and Renal Disease, With Particular Reference to the Diagnosis and Treatment. Aloysius O. J. Kelly.
11 A Case of Progressive Pernicious Anemia. L. M. Van Meter.
12 The Significance of Diacetic Acid in the Urine. C. K. Johnson.

Medical Record (N. Y.), October 27.

13 *Puerperal Sepsis; Its Pathology and Treatment. William R. Pryor.
14 *Foreign Bodies in the Esophagus. George W. King.
15 *Report of Three Cases of Intestinal Obstruction Due to Meckel's Diverticula. John F. Erdmann.
16 *Electric Light—Its Physiologic Action and Therapeutic Value in Tuberculosis of the Throat and Lungs. W. Freudenthal.
17 *The Importance of Preliminary Treatment of Intranasal Operations. Carl Seiler.
18 *A Contribution to the Diagnosis of Suppurative Appendicitis. A. Robin.
19 Intestinal Obstruction Complicating Appendicitis, With the Report of a Case. Thomas M. Paul.

Medical News (N. Y.), October 27.

20 *The City and Its Consumptive Poor; A Plea for a Municipal Sanatorium Outside of the Corporate Limits. Alfred Meyer.
21 *Repairing the Abdominal Wall in Ventral Hernia: A New Operation. Carl Beck.
22 *A Plea for the More Frequent Avoidance of Exsection of the Ovaries in Connection With Operations Upon Diseased Tubes. Philander A. Harris.
23 *The Importance of Rest in Pulmonary Tuberculosis. Carroll E. Edson.
24 Present Status of Interstate Reciprocity Concerning Licenses to Practice Medicine. (To be continued.) Emil Amberg.

Boston Medical and Surgical Journal, October 25.

25 *Congenital Dislocation of the Hip Joint. E. H. Bradford.
26 *The Coroner System of the United States at the Close of the Nineteenth Century. S. W. Abbott.
27 *Autopsies and Physical Examinations. R. O. Harris.
28 A Case of Contracting Scar of the Palm of the Hand Remedied by a Flap from the Abdomen. F. M. Briggs.
29 Removal of the Greater Part of Stomach for Carcinoma; Closure of the Pyloric End; Anastomosis Between Jejunum and Cardiac End; Recovery. W. A. Brooks, Jr.

Cincinnati Lancet-Clinic, October 27.

30 *Congenital Tumors of Childhood. Estella M. Riley.
31 Anal and Scrotal Eczema. J. S. Moreman.

St. Louis Medical Review, October 20.

32 Tertiary Syphilis of the Nose. Robert Levy.

Medical Age (Detroit), October 25.

33 Nephritis, With Special Regard to Prognosis. Frederick W. Robbins.
34 Iodism. Douglass W. Montgomery.

Pediatrics (N. Y.), October 1.

35 The Treatment of Scarlatinal Nephritis. (To be continued.) Robert Coleman Kemp.
36 The Care of the Higher Grades of Feeble-Minded. A. W. Wilmarth.

Chicago Medical Recorder, October.

37 *Compound Fractures. N. Senn.
38 *The Value of Antiseptic Nebulæ in Pulmonary Tuberculosis. Homer M. Thomas.
39 *Pressure Therapy in Gynecology and Obstetrics. Palmer Findley.
40 *Renal Calculi. M. L. Harris.

Fort Wayne Medical Journal, October.

41 Dipsomania. G. M. Leslie.
42 Occipito-Posterior Presentations. H. V. Sweringen.

Archives of Otology (New Rochelle, N. Y.), August.

43 Two Cases of Otitis Lateral-Sinus Disease; Operations, with Ligation of the Jugular. O. Joachim.
44 *Acuteness of Hearing Before and After Radical Operations. F. Wagner.
45 On Diseases of the Organ of Hearing in Pernicious Anemia. Dr. Schwabach.
46 A New Case of Mastoiditis in a Diabetic Patient. Dr. Muck.
47 Upon the Color of Living Rachitic Bone as Found During Mastoid Operations in Rhachitic Children. Dr. Muck.
48 Contribution to the Knowledge of the Otogenous Diseases of the Brain, Meninges and Sinuses. Dr. Muck.
49 Cholesteatoma of the Middle Ear, and Its Radical Operation; With Report of a Case. C. Zimmermann.
50 Contribution to the Knowledge of Intracranial Complications of Ear Disease. Dr. Witte.
51 Contributions to the Knowledge of Intracranial Complications of Ear Disease. Dr. Muck.
52 A Personal Experience of an Acute Attack of Autophony. Herman Knapp.
53 Report on the Progress of Otology During the First Quarter of 1900. Arthur Hartmann.

The Ophthalmic Record (Chicago), October.

54 Two Cases of Nystagmus. Alexander Duane.
55 The Influence of Abducting and Adducting Prisms on the Estimating of Distance. J. A. Lippincott.

International Medical Magazine (N. Y.), October.

56 *The Diet in the Acute Stage of Pneumonia. Andrew H. Smith.
57 *The Prevalent Treatment of Croupous Pneumonia in Hospitals. Julius L. Salinger.
58 *Hydriatic Measures in Pneumonia. Simon Baruch.
59 Alkalometric Treatment of Acute Affections of the Respiratory Organs. William F. Waugh.
60 Displacements of the Eyeball by Diseases of the Frontal and Ethmoid Sinuses—Two Cases. S. D. Risley.
61 Bacteriology and Microscopic Diagnosis of Pneumonia. A. Robin.
62 Empyema in Children. Floyd M. Crandall.
63 The Treatment of Blepharitis. Walter L. Pyle.
64 The Treatment of Pneumonia. W. Blair Stewart.
65 A Brief Discussion of Bronchitis and Pneumonia in the Aged. Guthrie McConnell.
66 The Etiology and Symptomatology of Dilatation of the Stomach. (Dilatatio Ventriculi, Gastrectasis.) Boardman Reed.
67 Acute Laryngitis. E. B. Gleason.

Iowa Medical Journal (Des Moines), October 15.

68 Address Before the Iowa Medical Society. J. F. Richardson.
69 Address Before the Iowa Association of Railway Surgeons. N. C. Morse.
70 The Present Standing of Rectal Surgery as a Specialty. R. D. Mason.
71 Eclampsia. J. Herbert Darey.
72 The Retroversio-Flexio Uteri et Fixata, or Better, Incomplicata et Complicata, Its Conservative and Operative Treatment. O. Thiennaus.
73 Epistaxis. B. C. Kelly.
74 Report of Section Materia Medica and Therapeutics. S. Bailey.
75 Smallpox. C. Stuart Hutchinson.

Journal of Tuberculosis (Asheville, N. C). October.

76 *Arthritism and Tuberculosis. Alfred C. Croftan.
77 The Growing Necessity for Sanitaria for the Tuberculous. William Porter.
78 Importance of Early Diagnosis and Prevention of Tuberculosis. J. L. Campbell.
79 Some Personal Observations on the Management and Treatment of Pulmonary Tuberculosis. Boyd Cornick.

Archives of Ophthalmology (New Rochelle, N. Y.), September.

80 Case of Traumatic, at First Doubtful, Orbital Sarcoma, Followed by Aseptic Thrombosis of the Cavernous Sinus. Herman Knapp.
81 Spasmodic Action of the Obliques in Cases of Abducens Paralysis. Alexander Duane.
82 *The Chromoscope: A Convenient Instrument for Studying the Color Sense of the Macula Lutea and Its Anomalies. M. Knies.
83 *On a Frequent, But Hitherto Unrecognized, Form of Congenital Violet-Blindness and on Color-Anomalies in General. M. Knies.
84 On the Color Disturbance Produced by Santonin in Normal and Color-Blind Eyes. M. Knies.
85 Transfixion of the Iris. Hugo Aschheim.
86 The Examination of Two Cases of Old Specific Chorio-Retinitis. G. Nagel.
87 A Contribution to the Therapy and Prophylaxis of Expulsive Hemorrhage During Cataract Extraction. Carlo Peirone.

Woman's Medical Journal (Toledo), October.

88 The Development of the Placenta. Susan Lehle.
89 Preventive Therapeutics. Julia S. Kapp.
90 The Medicolegal Relations of X-Rays. J. William White.

University Medical Magazine (Philadelphia), October.

91 Address by Provost Charles C. Harrison, Delivered at the Opening of the Medical, the Dental and the Veterinary Schools, Upon Monday, October 1, 1900.
92 Review of the History of Cardiac Pathology, With Especial Reference to Modern Conceptions of Myocardial Disease. (To be continued.) Alfred Stengel.
93 *The Relative Infrequency of Acute Specific Infection in the First Year of Life, With a Probable Explanation for It. A. C. Abbott.
94 Cystic Pelvic Tumor Appearing Below Poupart's Ligament and Containing Numerous Peculiar Loose Bodies. De Forest Willard and William G. Spiller.
95 *Review of Surgery, With Special Reference to Operation for Lateral-Sinus Phlebo-Thrombosis. B. Alexander Randall.
96 *Cases Simulating Glandular Fever. J. P. Crozer Griffith.
97 *Acute Cervical Lymphadenitis in Children (Glandular Fever), With Remarks on the Terminology and Treatment. Alfred Hand, Jr.
98 Report of Two Cases in Which the Signs of Mitral Stenosis Disappeared as Compensation Was Established. M. Howard Fussell and J. Dutton Steele.

Journal of Eye, Ear and Throat Diseases (Baltimore), Sept.-Oct.

99 Voice Pictures; or, The Wonders of Sound-Force.—Their Production and Their Photography. J. Mount Bleyer.
100 Recording of Hearing Tests—Project of Unifying—Synopsis, and Conclusions. F. Schiffers.

Canada Lance Toronto October.

101 A Case of Colloid Goiter, Involving the Middle Lobe of the Thyroid Gland, Associated With Asthmatic Attacks and Resulting in Sudden Death. H. B. Anderson.
102 The Alkaloids. Llewellyn B. Ashton.
103 A Chinese Hospital. Colin A. Campbell.
104 A Case of Broncho-Pneumonia Treated by Oxygen Inhalation. J. T. Fotheringham and A. F. Stanton.

Chicago Clinic, October.

105 *Treatment of Retro-Dislocations. S. G. West.
106 *The Significance of Pain in Appendicitis. E. H. Lee.
107 The Relation of Diseases of the Mouth to Diseases of the Internal Organs. J. H. Salisbury.
108 Infant Feeding With Modified Cow's Milk, With Special Reference to the Methods of Trinity Diet Kitchen. George T. Palmer.
109 An Anatomical Lecture. W. T. Eckley.
110 Intubation and Tracheotomy. Aime Paul Heineck.

Kansas City edical Record, October.

111 Vaginal Fistula; An Operation Refused. T. J. Riggs.
112 "Then and Now." E. R. Lewis.
113 Inflammation. Andrew L. Fulton.

Journal of Medicine and Science (Portland, Me.) October.

114 *Accidents of Syphilis. G. A. Pudor.
115 Placenta Previa and Accidental Hemorrhage. R. W. Bucknam.

Medical and Surgical Monitor (Indianapolis), October.

116 Foreign Body in Larynx and Its Removal. G. V. Woollen.
117 *The Gynecologic Hot Douche. Frank C. Ferguson.
118 Report of Two Cases: Dermoid Cyst Complicating Pregnancy; Large Ovarian Tumor in a Girl Four Years Old. Thomas B. Eastman.

Medical Examiner and Practitioner (N. Y.), October.

119 Height and Weight Table Compiled by a Committee of the Medical Section of the National Fraternal Congress, 1900. R. E. Moss.
120 Report of Committee on Tuberculosis. C. A. McCollom.
121 Some Results of Correspondence With Medical Examiners. T. Millan.
122 Appendicitis in Its Relation to Insurance. E. Francis Morrill.
123 How May We Secure Better Medical Examinations? A. H. Warner.
124 Women as Insurance Risks. M. M. Danforth.
125 The Relationship Between Cancer and Tuberculosis. J. D. Nagle.

Pennsylvania Medical Journal (Pittsburg), October.

126 Address in Surgery—Fracture of the Spine. Walter Lathrop.
127 Address of Welcome. F. M. Nichols.
128 Address of Welcome. H. M. Neale.
129 *Interrelationship Between Cardiovascular Disease and Renal Disease, With Particular Reference to the Diagnosis and Treatment. A. O. J. Kelly.
130 *The Diagnosis and Treatment of Beginning Pulmonary Tuberculosis. Charles Rea.
131 *The Treatment of Pneumonia With the Anti-Pneumonia Serum. Edwin Rosenthal.
132 Report of a Case of Meningitis Complicating Pneumonia, With Recovery. T. C. Ely.

Oklahoma Medical Journal (Guthrie), October.

133 Examine Railway Employees' Eyes Periodically and in a Scientific Manner and Thus Avoid Accidents by the Proper Observation of Signals. John R. Hamill.
134 When to Use Forceps in Obstetrical Cases. E. O. Barker.
135 Functional Heart Trouble. E. O. Barker.

Southern California Practitioner (Los Angeles), October.

136 Infusion of Normal Salt Solution in Disease. John H. Haynes.
137 The Lodge Question. Ernest Hall.
138 Hernia—Operations For. Claire W. Murphy.
139 Hydatid Cyst of the Liver—Report of Case. J. De Barth Shorb.
140 Mountain-Climbing in a Locomobile. Walter Lindley.
141 Treatment of Anemia and Loss of Weight in Wasting Disease. C. G. Stivers.

Doctors' Magazine (Alma, Mich.), October.

142 Habits and Mode of Life of the Mountaineers of North Carolina. C. B. Burr.
143 Notes from My Journal. Wm. Rittenhouse.
144 Charcot and the Salpetriere. L. Harrison Mettler.
145 Antenatal Diagnosis. J. W. Ballantyne.

Alabama Medical Journal (Birmingham), October.

146 Cholera Infantum and Summer Diarrhea of Children. P. H. Brothers.
147 Treatment of Burns, With Report of Cases. H. N. Rosser.
148 Burns. Ira J. Sellers.
149 Acute Entero-Colitis of Infants. William W. Harper.

AMERICAN.

2. **Massage of Seminal Vesicles.**—Eastman notices the difficulties of stripping the seminal vesicles, a practice which has come to be regarded by many as a valuable method in the treatment of chronic vesiculitis. The average finger is unable to reach more than a portion of this organ and he, therefore, has invented a thimble, imitating in its form the bent finger,

by which all portions can be reached and pressed. He has used these instruments for several months in a considerable number of cases and has had good results. Of course, they will be serviceable only in chronic cases, and should not be used until a careful examination has been made with the finger alone to ascertain the state of affairs.

3. **Fracture of the Nose.**—De Blois describes conditions met with in fracture of the nasal bones, showing how frequent the accident may be and how it may be remedied. There is more apt to be dislocation than fracture; the nasal bones become separated at their internal borders from the nasal processes of the superior maxillaries and take false positions. The most important treatment is reduction of the dislocation, and if injury is recent this is easy. Sometimes, if the patient is frequently seen and is ordinarily quiet, apparatus can be dispensed with after the fracture has been reduced, but otherwise, if the septum bulges or one side of the nasal bone shows a tendency to slip inward, an internal splint should be introduced on that side. External splints, well padded, will be found useful when the bone border has a tendency to slip outward, and also to protect the reduced dislocation or hinder second displacement. He gives an account of several cases showing how this accident occurs and how it has been remedied.

6.—See abstract in THE JOURNAL of October 27, p. 1104.

7. **Alum Baking-Powder.**—Smith has experimented on two healthy young men with bread made with alum baking powder and control-bread without it, using a test meal in each case and examining for total acidity, total hydrochloric acid, free hydrochloric acid, combined hydrochloric acid, and the pepsin test. The results in the two cases have been only such as would be likely to occur under any circumstances between the tests and varied alike after using the alum baking powder bread and the control-bread. The amount of bread used each time was 60 grams, which has been found to be most beneficial for stimulating gastric secretions; he considers it a fair amount. A more elaborate experiment was undertaken to determine whether the baking-powder bread was absorbed from the alimentary tract to the same extent as the control-bread and whether in the process of digestion and absorption there was evidence of any disturbing influence. The procedure was based on the method for determining the coefficient of availability of the constituents of the dietary. An individual was given a definite diet for a certain period of time—in his experiment, three days— and from the amount and composition of the food eaten and the stools separated it was determined how much the body had gained from the diet. By comparison with a control period under precisely the same conditions it was possible to conclude from his experiment whether or not the baking-powder bread was utilized by the body to the same extent as the control bread. The inquiry further included a study of the urine during each period to determine the nitrogenous waste and the relative amount of the products of putrefaction absorbed from the intestine. The subject was a healthy man, who had slight dyspepsia sometimes, but under ordinary circumstances had normal digestion. The diet during the experiment consisted exclusively of bread, meat, milk and butter. He gives the details of the experiment. It was found that the availabilities of the diets in the two periods are practically identical, agreeing as closely as can be expected from duplicate experiments on precisely the same diet. The conclusion reached by the author from these experiments is that food prepared by the use of a so-called alum baking-powder does not interfere with secretion in the stomach, and that, even when it makes up the major part of the diet, it is utilized by the body in the same way and to the same extent as an acceptable control diet. The investigation does not reveal any reason for believing such food at all injurious or unwholesome.

8.—See editorial in last week's issue and also p. 1170.

9. **Transplantation of the Patella.**—Senn reports and illustrates a case of extensive osteomyelitic defect of the tibia in which restitution of the bony structure was made by transplantation of the patella. The limb appears to be in a useful position and the patient is able to go about with the use of a cane, though it is hoped that this can soon be dispensed with. The case also shows that we can not rely on transplantation of bone from the lower animals, as this method failed.

10.—See also ¶129.

13.—See abstract in THE JOURNAL of October 27, p. 1104.

14. **Foreign Bodies in the Esophagus.**—King reports the case of a penny whistle impacted in the esophagus which required esophagotomy for its relief. He describes the anatomical structures and conditions and reviews the possibilities in such cases. Of course the operation of election would be removal through the mouth, but there are cases in which esophagotomy is called in; forcing the object down into the stomach is permissible when the object is known to be smooth and straight and not liable to lacerate the tissues.

15.—See abstract in THE JOURNAL of November 3, p. 1172.

16. **Electric Light in Tuberculosis.**—The value of light always has been recognized and Freudenthal gives special attention to the effect of electric light in laryngeal tuberculosis, reporting cases. He was induced to try this method by a patient who claimed great benefit from transillumination of the larynx made for diagnostic purposes, and while his expectations have not been entirely fulfilled in this kind of treatment, he believes that it is valuable and will be perfected. For the last twelve months he has been trying to have a more perfect apparatus made for light treatment of lung tuberculosis, but has not as yet succeeded. At present, however, he is able to say that we have in the chemical rays of electric light a healing power which promises to be of the greatest value in the near future. Although his attempts at treating tuberculosis of the lungs by this method are encouraging, he is not yet prepared to report upon them.

17. **Preliminary Treatment for Intra-Nasal Operations.**—The importance of preliminary treatment before operating on the nose is emphasized by Seiler, who describes the methods. What he calls the natural method, or as some patients have described it, drinking through the nose, is easily taught, easily learned and is efficient without being harmful. It consists in placing two ounces of blood-warm Seiler's solution in a small tumbler or cup, and placing the end of the nose within the rim of the tilted vessel until the liquid enters the nostrils, closing the mouth, and then, by a moderate inspiratory effort, drawing the solution into the nose and nasopharynx, thus bringing it in contact with all the parts of the nasal mucosa. The vessel should then be quickly removed and the liquid within the nasal cavity blown out through the nostrils at once and the process repeated until the vessel is emptied. The solution which he uses is that of his antiseptic pastil, which he says at present is not made accurately by manufacturers according to his formula, and he has therefore requested them not to use his name with it, as has been done. The cleansing process thus applied should be continued by the patient, while local applications of mild astringents and alteratives to the mucous membrane of the anterior and posterior nasal cavities are made by the surgeon at intervals of a day or two. The solution which he prefers is the iodin solution in glycerin (iod. met., gr. viii; glycerin, fl℥ss; potass, iodid, gr. xxiv). This is best applied by pledgets of cotton on the end of a delicate armed applicator, which should be carried through the nostrils along the lower meatus, which manipulation should be executed as gently as possible. Cocain in any shape or strength of solution should never be used within the nasal cavities except as a local anesthetic for minor operations. The habitual use of the drug has a relaxing effect, inducing slow repair of the injuries. He takes up the preliminary treatment in cases for operation for several weeks until the mucous membrane becomes comparatively healthy. In cases where on one side there is atony, or cartilaginous projection occludes one of the anterior nasal chambers, while the other is the seat of atrophic changes, stimulating astringents such as zinc sulphate, etc., should be employed until a reaction from the atrophic condition has taken place.

18. **Diagnosis of Appendicitis.**—The point made by Robin is the blood-count in which the leucocytes will show an addition, sometimes within twenty-four hours. He asks what other means we have for diagnosticating suppurative appendicitis, and answers, "Unfortunately, none." What we are able to diagnose is purulent peritonitis, but that does the patient very little good. We may occasionally detect a walled-off abscess, if it points externally, but this is rare. It is rational, therefore, to use a frequent blood-count in cases of appendicitis, and he maintains that this is almost imperative. It is true that sometimes fatal toxemia comes on so rapidly that no increase of leucocytes foretells it, but this is not the rule.

20. **The Consumptive Poor.**—Meyer makes a plea for the erection of state institutions for the care and treatment of the consumptive poor. He reviews the objections, mentioning that expense is a bugaboo and ought not to be considered. The saving would be in the wrong direction if it was made at the expense of human life. The claim that it will not eradicate the disease is not reasonable, and he asks why we should stop trying to eliminate or prevent it for this reason? He gives statistics showing the inadequacy of present provisions and holds that since the disease is a menace to public health, the state should take a hand in attempting its suppression.

21. **Ventral Hernia.**—The operation described by Beck suggests the one reported by Ferguson and abstracted in our last number. However, instead of using the rectus-muscle sheath, he takes a section of the muscle itself. His illustrations are intelligible and fairly explain the operation.

22. **Excision of the Ovaries.**—Harris pleads for conservatism in sparing the ovaries in operations for diseased tubes, and divides the operation for abolition or removal of the tubes into two general classes: One in which more or less of the tube is removed by cutting it off, which he calls amputation of the tube, and the other embraces the performance of complete removal of the tube, which can be effected only by an encircling or elliptical dissection around the tube and into the uterine mucosa. The incision in the wall of the uterus is then sutured. This he calls excision of the tube. Amputation alone does not, he thinks, destroy the function, and pregnancy may follow. It is probable in many cases that the short tubal stump forms a new ostium. He is satisfied that it would be better in the majority of cases to dissect away the diseased tissues around the ovaries and save these organs, or at least part of them. He himself has abandoned the practice of removing the ovaries with diseased tubes.

23. **Rest in Pulmonary Tuberculosis.**—The advantage of rest in pulmonary tuberculosis is insisted on by Edson, who points out the dangers of bringing about inflammatory action by exercise. The most important physiologic reason for insisting on rest in pulmonary tuberculosis is, he says, the influence of bodily exercise in increasing the temperature. Not only our physiologic knowledge, but clinical experience shows that the surest way of reducing the fever of pulmonary tuberculosis is by prolonged rest in the open air, that is, as nearly complete bodily quiet in the recumbent position as can be had. The additional tax on the circulation and respiration, especially in thinner air or higher altitudes, is all the work it is well to ask of the consumptive at first. If the patient adds to this a further call for muscular exertion the task is over-great. He gives as an illustration one case out of many showing the contrasted action of rest and muscular exertion under these circumstances. The objections offered to the treatment are the irksomeness, which he thinks is fallacious, and the possible interference with digestion and elimination, which he also considers ungrounded. Any signs of intestinal sloth are more easily remedied than the harm from extension of tuberculous disease induced by over-exertion.

25. **Congenital Dislocation of the Hip.**—Bradford advocates opening the joint and spreading the capsule in such a way as to free the acetabulum, inserting the head of the femur, stretching the capsule over and sewing it to the tissues around the neck. He advises osteotomy in cases in which there is a twist in the neck of the femur or an anterior obliquity of the plane of the acetabulum, as it remedies the condition. The cases operated on in the last year or so are encouragingly successful.

26. **The Coroner System.**—Abbott is in favor of the abolition of the coroner system, which, he thinks, is a hindrance to medical progress. He reviews the conditions existing in different parts of the country, in the main accurately, as we suppose, though he errs in regard to Illinois when he says that coroners are there appointed by the governor.

27. **Autopsies and Physical Examinations.**—This paper is written by a lawyer. The point on which he insists is the necessity of thorough examinations, instead of mere satisfaction as to the immediate cause of death. The autopsies, at least the correct and careful ones, can be made but once, and it is only by careful observation that all theories can be met and all questions answered, and this may be of the greatest importance to the state and to accused parties. In conclusion he makes some remarks in regard to physical examination of the living and the partisanship of experts.

30. **Congenital Tumors of Childhood.**—Riley reports the case of an extensive tumor of the abdominal wall which, she thinks, may be called a lipoma telangietaticum, and reviews the general subject of congenital growths.

37. **Compound Fractures.**—Senn's address treats exhaustively of the subject of compound fractures, reviewing the old and the more recent methods and statistics, the etiology, diagnosis, pathology, prognosis and treatment of these accidents. The treatment of the wound is far more important, he says, than that of the fracture, and especially during the first two weeks. The utmost care should be taken to render it aseptic in these cases. The dressing should be changed as little as possible. In case the wound should become infected, as shown by the rise of temperature after the first twenty-four hours, every stitch must be removed and drainage established wherever it appears necessary. Moist antiseptic compresses must take the place of dry dressings and frequent antiseptic flushings are indispensable. Antiseptic irrigation should be preceded by hydrogen peroxid and, if suppuration does not yield promptly to this treatment, continuous irrigation with mild antiseptics, such as Thiersch's, should be employed, which may save life. For further details the reader is referred to the article itself.

38.—See abstract in THE JOURNAL of October 3, p. 975.

39.—Ibid.

40. **Renal Calculi.**—Harris' article is largely historical, reviewing the facts and literature, also giving the symptoms, diagnosis and treatment. He holds that almost all renal calculi are microbic in their origin; the division into bacterial and non-bacterial will not stand the test. He describes the operation of nephrolithotomy. Other treatment is practically useless. There is no medical treatment unless it be symptomatic.

44. **Hearing After Operations.**—Wagner discusses the possibility of damage to hearing before and after radical operations, its tone-limits, hearing-duration, tone-education, etc., and concludes that when diseases in the ear have progressed to such an extent that all symptoms indicate the necessity of operation, the hearing power is reduced so that it will be affected to only a very small degree by the operation. The state of hearing occupies only a second place in the indications for operation, though in doubtful cases it may be that the expectant treatment will be desirable and useful.

56. **Diet in Acute Pneumonia.**—The theme of this paper is the special indications as regards feeding in acute pneumonia and a protest against over-feeding. The author thinks that pushing the nourishment has become with many the leading indication and the fact that adynamia is a result of systemic poisoning and not of exhaustion has been lost sight of. The full stomach aids in embarrassing the already labored breathing and also may produce flatulence as a result of fer-

mentation, making a very serious complication. We should restrict the diet in pneumonia, according to Smith, to the amount that can be easily digested and assimilated under the unfavorable conditions present. The food should be of such a nature that it will not readily ferment. The occurrence of flatulence should be met promptly by such medication as to the quantity and quality of food as will reduce the production of gas to a minimum. If other forms of food are not properly digested and assimilated, the substitution of a larger proportion of alcohol is indicated.

57. **Treatment of Pneumonia in Hospitals.**—Salinger, after remarking on the diet, which should be nutritious and easily assimilated, mentions the symptoms that often require attention. Pain is about the first of these, and can be relieved by local applications, though in some cases opium may be desirable. The early use of blisters is unnecessary, and venesection, while generally abandoned, may be life-saving in some cases, especially in young robust subjects with marked cyanosis, greatly distended right ventricle, feeble pulse and labored breathing. Here the withdrawal of 8 or 10 ounces of blood often materially helps the case. The second symptom is cough, which may be troublesome, but is readily relieved by small doses of opium. The temperature rarely requires treatment; antipyretic drugs are dangerous. If actual dyspnea is present the hypodermic use of strychnin is valuable and oxygen inhalations may be useful, but they must be continued for at least fifteen minutes at a time and repeated every two or three hours. Among the cardiac tonics strychnin is perhaps the best and may be given either hypodermically or by the mouth. Alcohol as a routine treatment is not necessary. It has its value in asthenic and alcoholic cases, but may be harmful in others. Heart failure is best controlled by strychnin, digitalis and the nitrites. When there is evidence of contraction of the peripheral circulation, nitroglycerin pushed to its physiologic effects often reverses the fatal issue. Sulphonal and trional are the best drugs for insomnia; hyoscine hydrobromate is of use in some cases. The salts of ammonia are useful in the stage of resolution and normal salt solution under the skin is indicated when the tendency to collapse is marked. Tonics are often required during convalescence, but recovery is usually rapid. In drunkards, active stimulation is necessary; alcohol, strychnin and oxygen are chiefly to be relied upon.

58. **Hydriatic Measures in Pneumonia.**—Baruch mentions the advantages of the tub-bath, with a temperature of 95 F., reduced in five to eight minutes to 85, in children. Baths of this kind repeated every four to six hours at the bedside calm the respiration, reduce the temperature, promote sleep, slow and strengthen the pulse and refresh the nervous system. In the interval between the baths he is in the habit, if the temperature and pulse are high, of using a compress wrung out of water at 65 around the upper portion of the trunk, renewed every hour if necessary. This may keep up the effects of the bath and diminish the need of its frequent repetition. In adult patients the tub-bath is less convenient, but wet compresses wrung out of water at 60, repeated every hour or oftener, if hot when removed usually fill all the therapeutic indications, and together with this he gives frequent draughts of water at 45. He finds this fortifies the patient's resisting power. The frequency of application, temperature, etc., are matters of judgment in each individual case.

76. **Arthritism and Tuberculosis.**—Tuberculosis and arthritis are rarely combined and Croftan has found in 100 consecutive cases of the latter, i. e., functional manifestations of the uratic diathesis, typic and atypic gout, only one case of tubercular infection, while in 300 selected cases of advanced pulmonary tuberculosis, only 3 showed coincident arthritic manifestations. He recalls his former articles showing that the arthritic taint consists in a tendency on the part of the organism to disintegrate a quantity of nuclein in excess of the normal and that the poisons circulating in the blood of the arthritic subject are the alloxuric bases. He argues that there is, consequently, a tendency to deposit the mineral constituents of the blood in the infected area of devitalized tissue and to aid in cutting them off from the rest of the body. In this way insufficient pabulum is offered the imprisoned bacilli, their vitality becomes impaired and they are ultimately destroyed. The necrotic tissues are absorbed and of the whole process nothing may remain but a fibrous cicatrix of chalky nodule. When leucocytic activity, a tendency to form concretions and nuclein-katabolism are at a maximum, the probability of invasion by the tubercle bacilli would be reduced to a minimum; therefore, arthritis forms a considerable immunity against tuberculosis. Diagnostically, when we find an increase of the excretion of the sum of alloxuric bases and of uric acid in cases at all clinically suspicious, we may consider it corroborative evidence toward the diagnosis of arthritis. The prognosis is in a measure favorable as regards tuberculosis, but if these are entirely absent in urine, and a low figure for the sum of uric acid and alloxuric bases is found, together with absence of perinuclear basophile granulations from the blood, it may be taken as corroborative evidence in the early diagnosis of tuberculosis.

83. **Chromoscope.**—Knies describes the chromoscope, an instrument devised by him for detecting color-defects, consisting of a box lined with black velvet in which one side can be turned down nearly to a horizontal. On the opposite side above is a small projection on which is a mounted flint-glass prism with an angle of 60 degrees. A strip of white paper 5 to 10 millimeters broad, is viewed through the prism, one margin of it being brought into the field, and the patient is instructed to select a skein of yarn similar to the color seen, without calling it by name. With this instrument he has detected a new form of congenital violet-blindness previously unrecognized, which he thinks is not rare. In ordinary life such persons are regarded as having normal color perception; it can hardly be noticed that they call violet blue or purple red. He sums up the chief points of his paper as follows: 1. Besides the well-known anomaly in which only two colors are seen, there is another still more frequent anomaly—violet-blindness—in which the remainder of the spectrum is seen correctly, and at least three fundamental color-perceptions must exist. 2. This color-anomaly accords neither with the Helmholtz nor with the Hering theory. 3. The chromoscope is a very convenient instrument for determining the color sense of the macula. 4. The four colors seen in the chromoscope are the fundamental colors for that particular individual. These may differ at different times in the same person if there is disease of the optic nerves. 5. According to their number and location in the spectrum, the congenital color-anomalies with normal anatomical and ophthalmoscopic conditions may be differentiated into two forms, each with two fundamental colors, the most fitting designations for which are: yellow-blue seeing and orange-blue seeing (the red-blindness and green-blindness of Helmholtz, protanopes and deuteranopes of v. Kries, and red-green blindness of Hering), or a form with as many fundamental colors as the normal-sighted possess, which is best designated as violet-blindness, since this is its prominent characteristic, although there is a shortening of the long-waved end of the spectrum, which measured in wave-lengths is almost as great as the shortening of the short-waved end—perception of four colors with contraction of both ends of the spectrum. 6. All three of these forms of congenital color anomaly are to be regarded as states of a less advanced development of the color-perception. The latter develops in extrauterine life in a way contrary to that in which it is lost in disease of the optic nerve. The three congenital anomalies of color are the three principal stages in the development of the color-sense. Intermediate stages may at times come under observation, but these are very rare.

93. **Acute Infections in Infancy.**—Abbott notices the infrequency of septic infections in early infancy and accounts for it on the theory that the mother affords the child immunity through milk, protecting it temporarily from the same disease from which she had herself suffered, and that with the cessation of nursing this protection is withdrawn.

95. **Lateral-Sinus Thrombosis.**—The improved prognosis of operations for this condition is noticed by Randall, and he

remarks in regard to the operations that there are three things in regard to which much yet has to be learned, one of which is diagnosis. The clinical symptoms may be strongly indicative in some cases or there may be complications masking their import. The prognosis in virulent infective cases is invariably fatal, as also in the less severe cases occurring in the weak and cachectic. The possibility that infection may dislodge septic particles or admit air-emboli must not be disregarded. In technique rapidity should be of the utmost importance. Jugular ligation is not invariably needful. He advises the thorough removal of all possible infection, hence curetting is probably, on the whole, better than irrigation. Shock should be sedulously avoided by preventing loss of blood, by the use of hot saline solution to maintain the temperature and by rapid and smooth use of the chisel, spoon or rongeur, avoiding as much as possible the mallet. Metastases already formed, even in the lungs, are not always contraindications for the operation, since the secondary foci are generally less virulent and may heal. Brain abscesses should be watched for, especially in the cerebellum. Meningitis alone seems to preclude recovery, and in some cases its symptoms disappear, showing it to have been a purely irritative affection.

96-97. **Glandular Fever.**—Several cases are reported by Griffith which simulated glandular fever and showed the difficulties of positively identifying such a condition. In the cases reported it would seem that influenza was really itself present. Hand reports several cases and concludes that the trouble is of various etiology and obscure as yet as to its pathology, and while the generally existing view is that it is one of the manifestations of influenza, there are cases where this complication and other causes are undoubtedly absent. The designation acute cervical lymphadenitis is, on the whole, better than that of glandular fever.

105. **Treatment of Uterine Retro-Dislocations.**—West recognizes three classes of cases of retro-dislocations: The first class, comprising about 6 to 8 per cent. of the cases, includes those of recent origin, that have existed less than one year. They are without adhesions and can be cured by palliative means such as restoration by bi-manual palpation and injections of bichlorid of mercury and water, and tampons and pessaries. The second class includes those with slight adhesions, which may be easily broken with the finger or may be dissipated by massage when more persistent treatment is required; there is also some promise to the patient from treatment with pessaries. The third class includes the old chronic dislocations without adhesions; these can not be cured by the use of the pessary, nor can they be remedied by plastic operations from below. The great maority of cases, with or without adhesions, form over one-half of all cases which present themselves for treatment, and he reviews the different operations. If there are firm adhesions in Douglas' cul-de-sac, with or without adhesions of the appendages, laparotomy in the median line, followed by uterine suspension, or Alexander's operation modified by anterior or posterior colpotomy, median laparotomy or incision through the internal rings may be required. If it is certain that adhesions to the fundus and tubes exist without other pathologic conditions, it is possible to safely separate these adhesions per vaginam and perform Alexander's operation. In cases of doubtful separation and doubtful condition of the appendages laparotomy in the median line should be performed. The advice to incise through the internal inguinal ring in order to deal with adherent tubes and ovaries does not recommend itself. It is a double operation, more open to the dangers of infection, and the danger from hernia is much greater. The objections to uterine suspension are not valid; they are only so as opposed to uterine fixation. He formulates his conclusions as follows: 1. There is a certain percentage of curable cases of retro-dislocation by palliative means alone. 2. Plastic operations alone will not cure chronic retro-dislocations. 3. Vaginal operations, except as adjuvants, are, as a rule, a failure. 4. The Alexander operation is indicated in all uncomplicated cases of retro-dislocation requiring operative treatment. It is indicated in cases of retroverted, anteflexed uterus without adhesions. It is indicated in cases of retro-dislocation with adhesions, when normal appendages exist, the adhesions in these cases first to be separated by anterior or posterior vaginal incision.

106. **Pain in Appendicitis.**—Lee finds that in appendicitis, as well as in other abdominal lesions, the pain in the early stages of the disease is of a colicky nature and due to an acute distention of the organ affected; that the greater the distention, the greater the pain. 2. That as soon as the acute constriction or distention has subsided or the obstruction has been relieved, these reflex colicky pains and nausea and vomiting cease, and the pains after this time are of a steady character. They should be described more as a tenderness in the right iliac fossa and are due to the circumscribed peritonitis. 3. That this last-mentioned pain subsides as the disease progresses toward its favorable termination, either by a perforation of the abscess into the bowel or possibly by the absorption of the circumscribed inflammatory process.

114. **Accidents of Syphilis.**—The accidents of syphilis noticed by Pudor include mistakes of diagnosis, non-recognition of syphilis and false diagnosis of its existence. Both of these may be disastrous, as he shows by case histories. The second series of accidents are those of treatment. He says that, with the exception of a few misguided individuals, the profession is uniform in the belief that in the mercurials we have a veritable specific against the virus. The form of mercury and the method of its administration, however, are disputed points. He mentions two ways of administering it, inunction and the internal use of the drug. The former is the one on which he depends as the only proper and satisfactory treatment. The so-called abortive treatment he condemns absolutely because it destroys the possibility of diagnosis at the time. Another accident of treatment is that of not giving the patient severe and explicit directions how to protect his neighbor, and he reports cases illustrating this fact. Nothing should be left for the patient to think out for himself in these cases.

117. **Gynecologic Hot Douche.**—The successful use of the hot douche in pelvic inflammation depends: 1, upon the degree of heat in which it is used. The water should have a temperature of 115 to 125 degrees; 2, the length of time in which it is employed. If it is discontinued before the secondary effect is secured, the parts are left in a worse state than they were before the douche was begun. It should not be discontinued under fifteen or twenty minutes. The longer the operation the better. The posture of the patient is of great importance and he recommends Sim's position, in which the vagina is ballooned out and its folds are obliterated. This is rather inconvenient, but the better efficiency of the position amply repays for all extra trouble. The head of water is important, and he thinks that this is overdone. It should not be over five or six inches above the pelvis. This gives a slow, steady flow of the current without much force, but carries as much heat to the part as two or three times that amount of water. He has invented a fountain syringe for irrigation. It has a double bag with a Y-piece and connected to a common discharge pipe. Each bag, however, is regulated by a faucet and the temperature can be increased or decreased at will.

129. **Cardiac and Renal Disease.**—The relation between cardiovascular disease and renal troubles is discussed by Kelly, who calls attention to the hypertrophy of the heart, the cardiac complication characteristic of chronic intestinal nephritis. This affects the left ventricle and with it we find increased arterial tension and other degenerative changes, showing evidences of embarrassed circulation. The clinical picture, in cases where compensation fails, is that of primary cardiac disorder and it may be important to know whether this is actually the case or whether the kidney disease is the real cause. If, however, we find, in addition to hyaline epithelial casts that albumin continues in the urine in spite of reduction of congestion in other parts of the body, it is probable that there is nephritis, but whether this is of long standing or not is to be determined by the past history. In the early stages of the condition, when the cardiac and renal dis-

orders are discovered before clinical evidences of their existence appear, the prognosis is not bad as regards life-expectancy. The patient should be advised to lead a hygienic, moral and abstemious life. When, however, the circulation becomes embarrassed, the prognosis becomes bad. The dangers to be apprehended are cardiac failure, arterial rupture and uremia. The patient should be put under hygienic conditions, should avoid excessive exercise, keep the bowels regulated, favor the action of the skin by using hot baths judiciously, and the diet should be regulated. Large quantities of proteids are certainly injurious. Meat once a day is sufficient, tea and coffee in moderation, but alcohol should be prohibited. If, with the above methods and an occasional saline purge, the symptoms are ameliorated, no medicine should be given, but when the heart begins to flag, Kelly knows of no better remedies than nitroglycerin and caffein. Only enough should be given to produce amelioration. The amount he suggests is nitroglycerin in 1/100 gr., and caffein in 3 gr. doses, but more may be required in individual cases. If there is an attack of uremia, as shown by headache, nervousness, etc., it is well to restrict the diet to milk and to give large quantities of water, as well as to add saline cathartics and alkaline diuretics. When there is no marked cardiac debility, there are several drugs that should not be given, among these digitalis and iron. The latter is valuable in all stages of parenchymatous nephritis, but is not so useful in renal cirrhosis. When marked dilatation is present and compensation fails, digitalis is indicated; but if it is not found of use after three or four days, it should be discontinued and strophanthus substituted. The alternative use of these remedies may also be useful. Strychnin is also another valuable remedy. Other remedies mentioned are the iodids, and mercuric chlorid, but the author does not specially favor their use. See also ¶10.

130. **Incipient Tuberculosis.**—The early symptoms of pulmonary tuberculosis, with sputum tests, are: First, a dry, hacking cough of the unobtrusive or throat-clearing variety, growing worse as the disease progresses. Next, the temperature. Normal or practically normal temperature after 5 or 6 p.m. is of great diagnostic import. The next is the pulse-frequency and arterial tension, beginning with almost constant acceleration of 10 to 20 beats, with diminished pulse-tension, the pulse not being influenced by the recumbent position. Hemoptysis and the gastric symptoms are also important. Rea has had no experience with the X-ray in diagnosis, but thinks it would be of value only when used by an expert. He has been afraid to use the tuberculin test. Too much consideration must not be given to any one physical sign or symptom: every point that can be brought out must be considered. In the treatment of incipient tuberculosis he lays special emphasis on out-door life and fresh air. As far as the diet is concerned, he would give nitrogenous foods first place in importance. Pulmonary gymnastics are of value, should be frequently indulged in and to the point of respiratory fatigue. He thinks that forced expiration is as important as prolonged inspiration. The wisdom of this, however, is doubted in slightly advanced cases on account of the danger of spreading the foci in forced inspiration. Pulmonary gymnastics with intrapulmonary medical treatment by nebulization under high pressure is a plausible method of treatment. Of the internal remedies, creosote has probably stood the test of time best, but lately he has used ichthyol in its place with better results as regards the stomach. The serum treatment, he thinks, offers more promise for the future than any other, though at present it is not perfected. In no disease is a specific and methodic attention to details more essential. This is the reason why sanatoria have such success.

131. **Antipneumonia Serum.**—Rosenthal has employed antipneumonic serum apparently with advantage, using it hypodermically in the side of the chest. When the temperature is 103 F. or over, the pulse 140, and the respiration 48 or over he begins with 20 c.c. of the serum, or where the type is more severe, with double this amount, followed every four hours by double the initial injection until the disease is under control, as shown by lowered temperature, slowing of respiration and disappearance of pain and improvement of the pulse and general condition. He thinks that it does not interfere with any other treatment and is itself harmless. It is important to get a fresh and reliable preparation and none of the foreign preparations possess these qualities.

FOREIGN.

British Medical Journal, October 20.

Prevention of Valvular Disease of the Heart in Cases of Acute Rheumatism. RICHARD CATON.—To prevent heart complications in rheumatism stop the disease as rapidly as possible and prevent all aggravation of it by chills. For this purpose rest in bed is of the first importance; salicylates to be given in full dose, often with alkalies, and cholagogues in such measure as to cause free evacuation but no diarrhea. The diet should be confined to milk and light farinaceous food; no red meat should be allowed for a considerable length of time. If there should be cardiac trouble or a bruit has developed which can be heard in the axilla and the second pulmonary sound becomes accentuated, rest is still more important and should last for five or six weeks at least. He advocates blisters near to or above the joint, and also in the region of the first four dorsal intercostal nerves, to directly stimulate the trophic and vasomotor nerves of the heart. For the removal and absorption of exudates he uses the iodids, usually sodium iodid and sometimes with caution a mercurial. His results in 85 cases during the last fifteen years, have been on the whole very satisfactory; of 54 already having had signs of cardiac trouble 34 of the diseased hearts apparently completely recovered, and only 3 of these in which it did not exist on reception developed it. He sums up the principles of treatment in acute endocarditis into prolonged rest and avoidance of active or violent exertion for several months after the attack and other precautions against another attack of rheumatism.

On the Resting Position of Anopheles. L. W. SAMBON and G. C. LOW.—The authors' remark on the statement which is going around that the anopheles at rest has it body nearly perpendicular to the surface on which it is fixed, and state that the anopheles claviger as observed by them in the Roman Campagna this year, had its body only at a partial angle, and by no means perpendicular. Some other species, however, agree with the common description. The resting attitude of the mosquito has lost this important diagnostic character between the culex and the anopheles genera.

Oophorectomy in Cancer of the Breast.—Boyd has investigated the subject of the effect of oophorectomy in cancer of the breast and tabulates the cases which he has obtained notes of in the literature. He thinks that the atrophy of cancerous masses after oophorectomy can not be an accident, and it is not due to laparotomy, nor to the use of thyroid. He divides his tabulated cases into two classes: 1, those where it seems to produce a clear or considerable result, and 2, those where it had little or no effect or the effect was dubious. Comparing these two groups he thinks that the average age of group 1 is considerably more than that of group 2, that is to say oophorectomy appears to do the most good in elderly women, contrary to what would be naturally supposed. The cases in group 1 are of more chronic type than those in group 2, and with one exception all the patients certainly past the menopause are included among the failures. As regards the amount of disease present the cases in group 2 are rather worse than those in group 1, though the quantity of superficial disease does not make the difference between failure and success. Wherever it has been evident that viscera and bones have been infected no improvement has taken place in them. On the other hand a very slight amount of disease may be little affected by the operation. The evidences of success appear early. Amenorrhea, atrophy of the uterus and more slowly of the breasts, are constant phenomena. Unpleasant effects, such as premature aging, grayness, mental changes, etc., seem to be rare. Sexual feelings are usually unaffected. He concludes that oophorectomy should be offered in cases other than the very acute in women over 40, with no visceral or bony lesions, in fair condition and before the menopause. The subject is still in the experimental stage.

Surgical Treatment of Exstrophy of the Urinary Bladder. JOHN BERG.—The conclusions of Berg's paper are as follows: "1. There is yet no method of treatment suitable for every case of exstrophy of the bladder. In selecting a method we must take into consideration the local changes as well as the patient's age, general state and especially the functioning of the heart and the kidneys. In so doing I think we shall meet a certain number of cases where all the circumstances are so extremely favorable for the less dangerous treatment—I mean the direct union—that no other method ought to be thought of, at least not until this has been tried in vain. 2. We are able in a number of cases to create such favorable circumstances—which could not be affected by means of orthopedic measures—by a synchondroscotomy after Trendelenburg or an osteotomy after Berg. The last named operation may have the advantage of a quite reliable osseous healing and of a more easily corrected position of the two halves of the basin. It can be performed on older patients. Trendelenburg puts as the highest age for the operation 8 years. I have successfully osteomised a patient of 15 years. With both these operations the direct danger of the treatment no doubt becomes greater, and thus we are left to make our choice between the autoplastic method and the transplantation of the ureters. 3. I suppose that many surgeons yet prefer the autoplastic method, as probably less dangerous. Personally I prefer, for reasons before named, to recommend the above-described method with single skin flap, covered by Thiersch's plan on its deep surface. 4. Considering the improved technique and the diminished danger which the operation of John Simon in our time has achieved, especially through Professor Magell in Vienna, it seems probable that this operation will be found to supersede other methods in a number of cases. For my own part, I should not hesitate to make use of it in old cases where the bladder is deeply destroyed or the other methods have failed. Though I fully join in Professor Bergmann's opinion expressed two years ago, that our present treatment of this deplorable deformity is far from ideal, I shall believe that the work of the past century even in this field has given us sufficiently firm ground for further labor, and that it would be unwise to make any wide departures from that which has already been gained."

The Lancet, October 20.

The Clinical Study of Heart Disease. NORMAN MOORE.—Moore advises full notes in every case of heart disease, giving what is actually heard or seen without any mixture of hypothesis as to the cause. The habit of determining accurately what we hear should be cultivated and all doubtful or doubting expressions avoided, so far as the evidence of the senses is concerned. Another point is to observe the pulse and compare its results with that of auscultation. In examining a case of valvular disease it is not too much to feel the pulse with close attention throughout three complete minutes, giving the number of beats in a minute in which any inequality or other peculiarity is observed. Another point in examining, is to determine if hypertrophy of the heart exists; it has almost always a morbid explanation. If it is a hypertrophy of the left side it means that valvular disease, chronic interstitial nephritis or adherent pericardium is present. When it is determined, it is to be decided which of these three conditions has produced it. As to the amount of hypertrophy his own experience does not entitle him to go farther than to say that when the apex-beat is in the nipple line and sixth interspace it may be double its natural weight. Dilatation, as distinct from hypertrophy, may be inferred from symptoms, but is rarely capable of being accurately demonstrated by physical signs alone. It may be rapid; he has seen extreme dilatation in six weeks. In most cases of long-standing chlorosis he believes some dilatation of the heart exists. In undoubted valvular disease the cardiac impulse is sometimes accompanied with a thrill. The question is whether this is due to mitral stenosis, to rigidity of the aortic valves, or to aortic aneurysm. The thrill produced from mitral stenosis is never felt except at the apex, but the thrill of rigid aortic valves may be felt there as well at the base and sometimes alone at the apex. The character of the pulse will in such cases prevent error. The systolic murmur of aortic obstruction, and the diastolic murmur of aortic regurgitation, and the double murmur caused when both defects are present, are occasionally distinct at the apex and more rarely inaudible at the base. The murmur of mitral stenosis is never audible at the right base. The murmur of aortic stenosis is probably the loudest of all; it is the only one he has ever heard at a distance of six inches without contact with the patient's chest. Any systolic murmur which is distinct at the apex may also be heard at the angle of the left scapula, and the great majority of these will prove to be cases of mitral regurgitation. The diastolic or presystolic murmur of mitral stenosis is never heard at the back. Careful auscultation of the back is important, especially in relation to the separation of a group of murmurs in the same heart. If the patient has mitral regurgitation and aortic stenosis, the systolic murmur produced at the mitral and aortic orifices may thus be distinguished in many cases. On the back the mitral murmur will be loudest at the angle of the left scapula; the aortic murmur will often be well marked in right supraspinous fossa. If this systolic murmur is traced down toward the angle of the left scapula it will be found to grow fainter, and then when the angle is reached to be again loud. The aortic stenosis murmur is generally audible in the right supraspinous fossa, where the diastolic murmur of aortic regurgitation may sometimes though less frequently be also heard. It may not be always possible to be sure that both mitral stenosis and aortic regurgitation are present. A distinct thrill confined to the apex will in many cases prove that the presystolic sound is due to mitral stenosis, while an accompanying diastolic murmur at the right base is never due to this and is proof of the presence of aortic regurgitation. Disease of the valves of the right heart are rare. Moore has seen postmortem one case of tricuspid stenosis in which stenosis of the mitral valve was not present. He has seen three cases of stenosis of the pulmonary valves without any congenital malformation or any valvular disease. The characteristic feature of such cases are the congenital murmur, loudest at the left base, and the fact that the pulse is normal and has none of the characters of the disease of the aortic valves or of the inequality common in mitral disease. It may be difficult in early childhood to distinguish the disease of the mitral valve from pulmonary obstruction with a small opening at the upper part of the septum between the ventricles. Careful and repeated examination of the pulse often is the best guide. One of the most difficult things to determine is whether or not there is an adherent pericardium, and Moore thinks the diagnosis can be made with actual certainty only when the mitral stenosis without other valvular disease is present. It is never on its own account, associated with hypertrophy of the left ventricle, and if we have this without signs of chronic interstitial nephritis the hypertrophy is certain to be due to adherent pericardium. The commonest valvular disease in the young is mitral regurgitation, and it is the most hopeful as regards prognosis. In a general way Moore thinks we ought to believe that every case of rheumatic fever is a case of endocarditis, and take the child's temperature four times a day if possible and treat every slight rise in temperature as a fresh attack. When angina pectoris is present, disease of the aortic valves is almost always present. Now and then a severe cardiac pain toward the apex occurs in mitral disease, but lasts longer than true angina pectoris. Aside from angina pectoris, mitral stenosis is of all forms of cardiac disease the most distressing to the patient, and absence of such distress will make it clear that aortic regurgitation and not mitral stenosis is the cause of a thrill and diastolic murmur. In mitral stenosis engorgement of the liver takes place early and often causes much pain. Bleeding from the arm, before a painful degree of hepatic engorgement has taken place, often relieves the heart, and after considerable engorgement of the liver has set in some relief may be obtained by leeches applied over this region.

Bulletin de l' Academie de Medicine (Paris), October 9.

Restoration of Palate, Nose and Lachrymal Ducts. GOLDENSTEIN.—The entire palate process, upper teeth and nose had been destroyed in the patient presented. Goldenstein's prothesis consists of a part supplying the missing roof of the mouth, gum and teeth, with a second portion applied over the

cavity of the nose, applying an artificial nose and screwing to the portion inserted from below. The average weight of the parts to be supplied is about 66 gm. and this prothesis weighs 6 gm. less. By an ingenious contrivance of springs the latter is supported by the floor of the nasal fossæ, on which spring clamps hold it immovable.

Journal de Medecine de Paris, October 7.

What Fractures are Amenable to Immediate Massage? LUCAS-CHAMPIONNIERE.—The term gluco-kinesis has been coined by Championnière to express his method of gentle massage without causing pain, applied as soon as possible after the injury that caused the fracture, with no attempt at immobilization. The repair of the bone and absorption of fluids is much more rapid and complete than with other methods of treatment. The vitality of the parts, suppleness and nutrition are maintained while the pain and contraction rapidly disappear. The fractures that always benefit by this treatment are those of the upper portion of the humerus to the insertion of the deltoid, and of the lower portion to four finger widths from the joint; all fractures of the malleoli with no tendency to displacement sideward or backward; all fractures of the elbow and especially of the olecranon, all fractures of the radius at the wrist without too much retrodisplacement; nearly all of the clavicle; all of the lower portion of the fibula without a tendency to deviation from the axis of the foot; all fractures of the femur or tibia at the knee without displacement, and also all fractures of the scapula. Other fractures which exceptionally justify this method of treatment are those of the middle portion of the humerus and of the two bones of the leg without displacement, and fractures of the two bones of the forearm. In certain other cases massage and immediate mobilization can be combined with the use of an apparatus, but the results are less complete and remarkable than when no apparatus is used. In children mobilization is sufficient without massage, and the latter is also omitted in the aged if the veins are dubious.

Presse Medicale (Paris), September 26 and October 17.

Remote Results of Operative Treatment of Hypertrophied Prostate. F. LEGUEU.—Hypertrophy of the prostate is taking its place as a primary affection, the bladder involvement secondary to the mechanical interference, with consequent retention of urine. The most rational treatment is the removal of the obstacle. The benefits will be more apparent the earlier the intervention, before the bladder has lost its contractility and before infectious complications have appeared. The excision must be ample, removing all the portions of the gland that are hypertrophied or liable to become so. Suprapubic prostatectomy is sufficient for a limited obstruction, but the lateral lobes can be effectively reached only by way of the perineum, although it is impossible to remove the extravesical protuberances by this route. Legueu suggests that a combination of both routes might be useful, removing the middle lobe by a hypogastric incision and the lateral lobes by the perineal route. He anticipates in the near future the advent of total prostatectomy. Cystostomy is a last resource and merely palliative. Castration is only beneficial when bilateral and done in the first phase of acute retention. Later it proves merely a palliative resource to prevent recurring orchitis and attacks of congestion with hemorrhage, although it occasionally improves the vesico-prostatic conditions. The only benefit derived from vasectomy and its only indication is the suppression of recurring orchitis. These operations on the testes will soon join Battey's method of ovarian castration as a treatment for uterine fibromata, and only survive in history.

Revue de Chirurgie (Paris), October.

Suturing Wounds of the Heart. F. TERRIER.—Two years ago Terrier reviewed the experiences and indications for suture of the heart and pericardium in the treatment of stab wounds. He has since collected twelve new cases, and after carefully studying the methods of incising and suturing and the results of the intervention, pronounces the evidence in favor of Fontan's method of reaching the heart. This is by means of a large flap opening outward, comprising the fourth, fifth and sixth ribs, the nipple in the center, the inner edge just inside the chondrocostal articulations, the lower edge extending through the center of the space below the sixth rib. The upper edge of the flap follows a horizontal line from the center of the space on the left to the chondrocostal articulation of the fourth rib. This flap, turned outward, can be enlarged at will. The soft parts and cartilages left on the right can be turned back over the sternum. The upper and lower ribs are cut on the axillary line; the middle rib is broken with the hand. This flap can be rapidly cut and enlarged at will. Hemostasis is simple and it is easy to keep from injuring the pleura, but the chief advantage is that it allows the latter to be detached and pushed out of the way. Fontan and Maliszewski seized the bleeding portion of the lung with forceps and left it until after they had attended to the heart wound. This terminated, they returned to the lung, resecting or suturing with catgut, and then attending to the pleura. In suturing the heart a continuous suture seems to be preferable to separate stitches. The pleura, and especially the pericardium, should not be drained, but closed completely whenever possible. Three of the 12 patients recovered. The deaths occurred between the first and twentieth day. Infection was evident in 5 cases, in 2 death was due to extreme loss of blood. Narcosis was induced in 2 of the 3 successfully operated cases. The left ventricle was the seat of the injury in 7, the right in 2, the apex 2, and the left auricle in 1. In each case the pleura had been traversed by the stab and blood was found in it, once as much as 3 liters.

Subpyloric Gastroduodenostomy. E. VILLARD.—In three cases of cicatricial stenosis of the pylorus Villard isolated it and produced an ample outlet for the stomach with none of the disadvantages of the usual gastroenterostomies, by suturing together the stomach and the duodenum where they parallel each other below the pylorus. He first made a continuous suture of the two juxtaposed sides, stopping an inch or so below the arch of the pylorus. Then both stomach and duodenum were incised for the proper distance, the incisions brought face to face and the suture continued around them, thus making a lateral anastomosis. Fine silk was used for the sutures. The incision into the stomach was made on the posterior margin of the greater curvature, not on the front. The benefits were apparent at once in the three cases described. Vomiting ceased and with it the oppression and pain. One patient gained two kilograms in six days, and more than twenty-three in four months. The chemistry of the stomach has become normal even in one case in which suspected cancer and pulmonary tuberculosis are progressing. One case dates from 1897. The indications are cicatricial stenosis of the pylorus, or stenosis of biliary origin in which the mere liberation of an adhesion will not re-establish the lumen of the intestine. He has found the operation very successful in relieving an ulcer of the stomach with hematemesis and uncontrollable vomiting. Thorough lavage and emptying of the stomach is an indispensable preliminary.

Berliner Klinische Wochenschrift, September 24 and October 8.

Treatment of Bronchial Affections by Reclining With the Head Lower Than the Feet. O. JACOBSON.—The benefits of reclining flat and then having the foot of the bed raised are most pronounced in chronic bronchial affections. Jacobson explains the mechanism of the process as the shifting of the secretions by their own gravity from the spot where they have been accumulating to spots where the mucous lining has not become deadened by long contact with them. When they touch new, sensitive points, reflex coughing is induced and the entire accumulation is coughed up. This method prevents stagnation and putrefaction of the secretions and is particularly valuable in curing fetid bronchitis, relieving the patient for all day. It also renders good service in certain cases of abscess of the lungs, and especially in chronic "cylindrical" bronchogonorrhea. It is contraindicated in acute bronchial affections in which the mucosa is always hypersensitive, and coughing is incessant. The patients recline for an hour morning and evening, and later only in the morning.

Centralblatt f. Bakteriologie (Jena), September 20.

To Fix Blood Specimens. A glass bell, like a large bottle without a bottom, is placed over the thin specimens of blood on cover-glasses. One drop of formalin is then placed on a

cover-glass fastened to the bottom of the stopper of the bottle, which is then replaced and the specimens left for fifteen to thirty minutes in the fumes that develop. The bell is about 135 mm. in diameter by 150 high.

Dermatologisches Centralblatt (Berlin), October.

Prevention of Syphilis and Sycosis in Barber Shops. S. BEHRMANN.—There is little hope that barbers will conscientiously sterilize their instruments and towels to prevent contagion, even if police regulations require it. Behrmann thinks that the better way is for the customer to require him to rub a little mercurial ointment or soap on every spot that bleeds after shaving. Extensive bleeding can be controlled with salicylated gauze or cotton. He recommends carrying some of this salve and gauze to the barber shop for the purpose. Bay rum will destroy the parasite of sycosis or herpes tonsurans, and a little gray ointment rubbed into and left on a cut or scratch will destroy any syphilitic infection. This can be done after the return home.

Muenchener Med. Wochenschrift, October 9 and 16.

Commencement of Idiopathic Dilatation of the Heart. E. WOLFFHUEGEL.—All the injuries which lead to acute dilatation of the heart have in common an increased pressure in the arterial vascular system and an increase in the heart's action to overcome it. The most frequent cause is an infectious disease, in the largest majority of cases influenza or articular rheumatism. The obesity that follows excessive beer drinking is another cause. Most of the cases of idiopathic dilatation have long been preceded by abnormal heart action, although not sufficient to arouse attention. Marching in uniform, with constricting collars and belts, is an important factor, interfering with respiration and secondarily with the heart action. Under other circumstances the coat is thrown open, the burdens laid down on the first symptoms of oppression, but the soldier is ambitious to keep up and in his place. Excessive exertion is not necessary to tax too far a heart with a congenital or acquired weakness of the muscle. Auscultation and percussion determine, in case of valvular insufficiency, whether it is a regulating process or due to weakness of the muscle. Radioscopy is also an important aid in diagnosing. In general it is best to refrain from taxing soldiers who present evidences of a dilating weakness of the heart muscle during the second year of service, while on the other hand, during the first year it is reasonable to expect that judicious training will strengthen the muscle. If the weakness persists after the first year it is practically irremediable.

Acute Formalin Intoxication. J. KLUEBER.—A healthy man drank a little diluted formalin by mistake. His symptoms resembled those of acute alcohol intoxication, stupor for several hours, anuria for nineteen and congestion of the conjunctivæ and throat, with complete recovery by the third day.

October 16.

Typhoid Cystitis. H. CURSCHMANN.—About fourteen writers have mentioned the occurrence of typhoid bacteriuria in their experience, ranging from 2 to 100 per cent. of all cases of typhoid fever, or an average of 15 to 30 per cent. None mention the occurrence of secondary bladder infection, but Curschmann has recently had occasion to observe three cases of suppurative cystitis with the typhoid bacillus pure in the lesion. The affection seemed milder in its course than cystitis due to the streptococcus or staphylococcus, and yielded readily to the ordinary measures. Houston's is the only similar case to be found in literature and his was distinguished by the duration of the cystitis—three years. The urine was acid in each of these cases.

Disinfection With Carboformal Incandescent Bricks. DIEUDONNÉ.—A very simple and effective method of disinfection of rooms, etc., is provided by the bricks, containing 59 gm. of paraformaldehyde in the center, which have recently been put on the market. Lighted with a match, the bricks smoulder and the paraformaldehyde generates gas without actually igniting. For country practice they will be found invaluable. To produce the necessary preliminary moisture two liters of boiling water will fill an ordinary room with steam. Tests with 2.5 gm. formaldehyde to the cubic meter in these carboformal bricks destroyed all the bacteria and almost all the anthrax spores. Even as small a quantity as 1.6 gm. destroyed 60 per cent. of the germs.

Significance of the Crystals in the Feces. SCHILLING.—Numerous examinations of the sediment of softened feces have convinced Schilling that the variety and amount of crystals to be found in the stools has been far underestimated. He states that every plant, berry, fruit, blossom, leaf and root contains crystals, mostly oxalates and calcium carbonates. These are found in the feces in great numbers and also the triple phosphates. The glittering of the crystals can be seen with the naked eye in the sediment of the feces. These crystals probably serve some useful purpose in the alimentary canal, possibly stimulating peristalsis and the innervation by the mechanical irritation of the thousands of tiny insoluble particles. If this assumption prove correct vegetable diet acquires new significance in the treatment of habitual constipation.

Brazil Medico (Rio Janeiro), September 23.

The Operated Xiphopagus. I. DA ROCHA.—In all scientific literature there were only three cases recorded of the separation of a xiphopagus, until Chapot-Prevost operated on Rosalina-Maria. One of the three cases is extremely doubtful; it was recorded in 1689, and is mentioned as dubious by contemporaries. The second was only a superficial connecting band between two twins, the wound measuring 5½ cm. The patients in this case were operated on by the father, Dr. Boehm, of Bex, Switzerland, in 1866. The third case was a true xiphopagus, the first ever operated on, and was reported by Biaudet and Bugnion in 1881. The liver was continuous, and both children died in six hours afterward from hemorrhage of this organ. Chapot-Prevost's operation is thus the first successful one of the kind in history, and although Maria died from pleuro-pericarditis five days later, the autopsy showed that the wound in the liver was normally cicatrized. The connecting band was 14 cm. wide by 7 thick; the area of the cut surface of the liver, 4 to 6 sq. cm. Such an extensive hepatotomy has never been done before. The operation was performed at the urgent request of the parents. The heart in the surviving Rosalina is on the right side.

Revista Medica del Uruguay (Montevideo), August.

Syphilitic Contagion from Nurslings. L. MORQUIO.—The outside service of the Foundling and Orphan Asylum at Montevideo had charge of 819 children in 1899, with a mortality of 8.9 per cent. In spite of the most rigid care, there were a few cases of syphilitic contagion of the wet nurses to whom the foundlings are confided at their homes. To prevent this calamity Morquio is urging the regulation that every infant less than 3 months old, whose parents are unknown, shall be considered possibly syphilitic, and not given out to breast-nursing. Besides avoiding the danger of contagion, this enlarges the choice of nurses. He always gives the preference to those in good circumstances rather than to the very poor.

Change of Address.

C. L. Abbott, Ft. Seneca, Ohio, to San Pablo, Cal.
J. W. Beebout, Hiramsburg, to Caldwell, Ohio.
B. E. Braselton, Vineyard, to Weatherford, Tex.
D. M. Barstow, 6 E. 9th St., to 21 W. 53d St., New York City.
W. R. Beck, 5 E. Market St., to 121½ N. Jefferson St., Huntington, Ind.
J. C. Bird, 1148 6th St., Louisville, Ky., to Soldiers' Home, Danville, Ill.
W. R. Blue, 214 W. Broadway, to 308 W. Chestnut St., Louisville, Ky.
J. L. Bell, French Lick, Ind., to The Nelson, Walnut Hills, Cincinnati, Ohio.
W. J. Bell, Atlanta, Ga., to Berlin, Germany.
Harold Bailey, Charles City, Iowa, to 6 Upper Bedford Place, Russell Square, London, W. C., England.
J. F. Clark, Toledo, Ohio, to Ouray, Colo.
W. N. Culmer, Bedford, to Springville, Ind.
Johnson Eliot, 1417 M St., N. W., to 718 H St., N. W., Washington, D. C.
J. L. Fleming, Jack's Creek, Tenn, to Fulton, Ky
W. J. Furness, 744 St. Nicholas Ave., to 271 W. 134th St., New York City.
M. Frahm, Mattoon, to Tuscola, Ill.
J. H. Farrell, San Francisco, Cal., to 92 State St., Chicago.
E. S. Godfrey, Jr., 418 S. Broad St., to 261 S. 10th St., Philadelphia, Pa.

A. W. Harold, Ackley to 117 E. Burlington St., Iowa City, Iowa.
G. P. Hurd, Reading, to 94 Main St., Winchester, Mass.
V. H. Hulen, 406 Sutter St., to 135 Geary St., San Francisco, Cal.
Lenora B. Hamly, 1424 Clarkson St., to 326 15th St., Denver, Colo.
R. B. Jackson, 156 W. 53d St., New York City, to Harvard University, Washington, D. C.
R. B. Johnson, Norfolk, to Madison, Neb.
W. W. Johnston, Cameron, to La Grange, Ill.
E. F. Jones, Garretson, Iowa, to Garretson, S. D.
William Kelly, Changteh, Hunau, China, to U. S. Consulate, Shanghai, China.
P. D. Kerrison, 158 W. 97th St., to 772 Park Ave., New York City.
F. W. Kerchner, Belleville, to Caseyville, Ill.
J. H. Keaney, 1026 N. Eutaw St., to 800 Madison Ave., Baltimore, Md.
J. Klein, 530 Lunt Ave., to 4810 N. Clark St., Chicago.
Emma J. Keen, 1404 Tremont St., to 1618 Glenann St., Denver, Colo.
J. E. Lacy, 822, to 713 S. Summer St., Nashville, Tenn.
Edw. Luehr, 9241, to 9141 Houston Ave., South Chicago.
S. L. McElroy, Kirkland, to Allapaha, Ga.
A. S. MacKnight, Adamsville, R. I., to 1095 N. Main St., Fall River, Mass.
R. E. Mason, Jr., Seneca, S. C., to Gastonia, N. C.
P. H. McMillan, Shiloh Hill, to Ava, Ill.
P. L. Manning, 10 Decatur St, Atlanta, Ga., to Gould Bldg., Mulberry, Ohio.
J. H. Mullett, Ann Arbor, to Pontiac, Mich.
J. H. Murphy, St. Paul, Minn., to Boston, Mass.
M. G. Motler, 2114 Connecticut Ave., Washington, D. C., to 633 N. 16th St., Philadelphia, Pa.
S. H. Meuer, Denver, Colo., to 204 W. 114th St., New York City.
G. Natanson, 1535 Madison St., New York City, to 209 Eastern Parkway, Brooklyn, N. Y.
W. B. Newton, Glasco, Kan., to 513 S. College St., Nashville, Tenn.
H. A. Reinhard, Milwaukee, Wis., to 460 W. Adams St., Chicago.
A. Q. Shryock, 28 33d Pl., Chicago, to Grass Creek, Ind.
J. F. Strong, Kilbourne, Iowa, to Socorro, N. M.
G. W. Shipman, Armada, to 278 Forest Ave., W., Detroit, Mich.
E. L. Tompkins, Fine Creek Mills, Va., to 1512 A St., Washington, D. C.
C. C. Tallman, Keota, Iowa, to Silver Cross Hospital, Joliet, Ill.
R. H. Tullis, Eldora, Colo., to Springfield, Mo.
G. G. Verbryck, Green River, to Tie Siding, Wyo.
C. P. Vickers, Kansas City, Mo., to Zimmerly Bldg., Wichita, Kan.
C. J. Warner, Wooster, to Congress, Ohio.
E. E. Walker, Forksville, to Millwood, Va.
John Wright, Clinton, Ill., to Roseberry, Ore.
J. W. Williams, 125 Patterson Park Ave., to 2326 Fairmount Ave., Baltimore, Md.
E. R. Westcot, Hunt Spur, to Sidnaw, Mich.
B. W. Yielding, Starrucca, to Forest City, Pa.

Queries and Minor Notes.

MEDIICAL PRACTICE LAWS.

RIDGEFARM, ILL., Oct. 31, 1900.

To the Editor:—What states require an examination before State Board for practice? It is the states of Iowa, Indiana and Wisconsin of which I wish to know. I may say that I am a graduate of Bellevue Hospital Medical College of New York City. If you can give me any information relative to the subject you will greatly oblige. Yours respectfully, J. B. M.

ANS.—License is given on registration of a satisfactory diploma in Wisconsin. If diploma is not satisfactory examination is required. The State Board of Medical Examiners meets on the second Tuesdays in July at the Park Hotel, in Madison; in October, at the Athearn Hotel, in Oshkosh, and in January and April, at the Hotel Pfister, in Milwaukee. Circulars of instruction can be obtained from Dr. H. M. Ludwig, secretary, Richland Center. In Iowa a satisfactory diploma and examination is required. The secretary is Dr. J. F. Kennedy, of Des Moines. The conditions of practice in Indiana were given in THE JOURNAL, Sept. 8, p. 656.

PENSION BOARD SIGN.

CHICKASHA, I. T., Oct. 20, 1900.

To the Editor:—In the following instance what is your opinion? A Pension Examining Board selects the office of secretary of the said board as its regular place of meeting for the transaction of its official business and designates such place to the public by lettering the words "Pension Board" on the window facing a public thoroughfare; said window is contiguous to a window on which the secretary's name is lettered, together with the word Doctor. Is this objectionable and unethical. C. P. B.

ANS.—Applicants for pensions would be put to some inconvenience to find the examiner's office if it were not designated by some sign. The putting of the Doctor's sign in an adjoining window is a matter of taste, but is not unethical or objectionable, because it does not advertise himself any more than a door-plate would do. As a matter of taste it would be better to have the usual plate on the door of the office, and the pension card in the window.

UNTOWARD ACTION OF DRUGS.

CHATTANOOGA, TENN., Oct. 25, 1900.

To the Editor:—Will you kindly state in THE JOURNAL if there is any work on the unusual, peculiar or strange action of drugs, similar to but more satisfactory than Lewin's "Untoward Action of Medicine?" Very sincerely, U. S. MCGHEE.

ANS.—We know of no recent work. Some years ago Morrow published a work on drug eruptions (Wm. Wood & Co.), but this does not cover the whole field and we believe there has been no recent edition of either it or Lewin's work. There have been numerous articles in the medical journals on special by-effects of various drugs, but no collective summary of them in book form so far as known to us.

OWNERSHIP OF PRESCRIPTION.

ESSEX, ONT., Oct. 29, 1900.

To the Editor:—Would you kindly inform me to whom a prescription belongs, druggist or physician, after being once dispensed? If druggist removes from one store to another can he legally take the prescription with him for the purpose of again being dispensed at request of patient, supposing, of course, that the physician objects. It appears to me the physician has a property-right in his prescription. Please answer in the next issue of your valuable journal. J. B.

ANS.—This question is one in regard to which there has been as yet no legal decision. In THE JOURNAL, June 24, 1899, p. 1463, there appeared a notice of a Texas decision, in the case of Stuart vs. Hirsch, in which the Court of Civil Appeals held that a druggist has a right of property in prescriptions filed with him, and such rights are transferable in Texas. The rights here spoken of, however, are considered particularly as existing betweeen the druggist and third persons, the rights of the persons depositing the prescriptions being only incidentally referred to. The court did not consider a prescription merchandise in the usual and understood sense of the term, so as to be covered by a mortgage of stock, fixtures, etc. This does not seem to touch especially on the property-right of the physician. The subject has been considerably discussed, and the view held by the druggists and physicians appears to be that whatever may be the case as between them, the patient has no property-right in a prescription.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant General's Office, Washington, D. C., Oct. 17 till 24, 1900, inclusive:

William J. Boyd, first lieutenant and asst.-surgeon, U. S. V. (recently appointed), is assigned to the 40th Infantry, with rank from Sept. 6, 1900.

Henry H. Bradley, acting asst.-surgeon, from Camp William H. Osborne, Idaho, to Buffalo, N. Y., for annulment of contract.

Carroll D. Buck, acting asst.-surgeon, to proceed from Fort Yellowstone, Wyo., to San Francisco, Cal., for transportation to Manila, P. I., where he will report for assignment in the Division of the Philippines.

James Carroll, acting asst.-surgeon, sick leave of absence extended.

William D. Crosby, captain and asst.-surgeon, U. S. A., member of a board in New York City to examine officers of the quartermaster's department for promotion.

Charles Fitzpatrick, first lieutenant and asst.-surgeon, U. S. V. (recently appointed), is assigned to the 45th infantry, with rank from Aug. 9, 1900.

Joseph C. Garlington, acting asst.-surgeon, from Washington, D. C., to duty at Fort Mott, N. J.

James H. Hysell, major and surgeon, U. S. V., leave of absence granted.

Thomas D. Ingram, acting asst.-surgeon, from Fort Mott, N. J., to Washington, D. C., for annulment of contract.

David J. Johnson, acting asst.-surgeon, from Plattsburg Barracks, N. Y., to Roxbury, Mass., for annulment of contract.

Henry S. Kilbourne, major and surgeon, U. S. A., member of a board in New York City, to examine officers of the quartermaster's department for promotion.

Paul H. Ludington, acting asst.-surgeon, from Omaha, Neb., to New York City, for assignment to the transport *Kilpatrick*.

Edward L. Munson, captain and asst.-surgeon, U. S. A., sick leave of absence extended.

Herman J. Schlageter, acting asst.-surgeon, from temporrary duty at Vancouver Barracks, Wash., to report to the commanding general, Department of California, for assignment.

Milton Vaughan, acting asst.-surgeon, relieved from duty in the Department of Eastern Cuba, to proceed to San Francisco, Cal., for assignment to duty with troops going to the Division of the Philippines.

Richard Wilson, acting asst.-surgeon, from duty in the Department of Eastern Cuba, to report to the Surgeon-General at Washington, D. C., for instructions.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Oct. 27, 1900.

P. A. Surgeon D. H. Morgan, commissioned passed asst.-surgeon from Nov. 27, 1899.

Asst.-Surgeon R. E. Ledbetter, appointed asst.-surgeon from Oct. 19, 1900.

Marine Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Oct. 25, 1900.

Surgeon Preston H. Bailhache, to proceed to the purveying depot, New York City, as inspector.

Surgeon J. M. Gassaway, two days' leave from October 19, 1900, under paragraph 179, Regulations.

Surgeon G. W. Stoner, three days' leave of absence Oct. 16, amended so that said leave shall be for two days only.

Asst.-Surgeon L. E. Cofer to proceed to Philadelphia and report to the medical officer in command for temporary duty.

Asst.-Surgeon Carroll Fox to proceed to Portland, Ore., and assume command of the service.

Asst.-Surgeon L. C. Bean granted leave of absence for two days.

Asst.-Surgeon G. A. Gregory granted leave of absence for seven days.

Hospital Steward and Chemist H. Gahn granted leave of absence for twenty days from November 12.

Temporary Hospital Steward and Assistant Chemist A. M. Roehrig relieved from duty at San Francisco, Cal., and directed to proceed to the Immigration Depot, New York City, reporting to Surgeon L. L. Williams for duty.

Hospital Steward W. F. Schlaar, upon being relieved by Temporary Hospital Steward and Assistant Chemist A. M. Roehrig, to proceed to Washington, D. C., and report at bureau for duty.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Oct. 27, 1900:

SMALLPOX—UNITED STATES.

Colorado: Arapahoe County, Sept. 17-Oct. 10, 9 cases: Rio Grande County, Sept. 25-Oct. 5, 4 cases; Custer County, Oct. 5, 1 case.

Kansas: Cherokee County, Sept. 1-30, 3 cases; Crawford County, Sept. 1-30, 4 cases; Douglas County, Sept. 1-30, 1 case; Rawlins County, Sept. 1-30, 4 cases; Shawnee County, Sept. 1-30, 2 cases.

Louisiana: New Orleans, Oct. 13-20, 1 case.

Minnesota: Minneapolis, Oct. 13-20, 1 case.

New Hampshire: Manchester, Oct. 13-20, 1 case.

Ohio: Cleveland, Oct. 13-20, 7 cases.

Pennsylvania: Philadelphia, Oct. 13-20, 3 cases.

Utah: Salt Lake City, Oct. 13-20, 6 cases.

SMALLPOX—FOREIGN.

Argentina: Buenos Ayres, Aug. 1-31, 10 cases, 4 deaths.

Austria: Prague, Sept. 22-29, 1 case.

Belgium: Antwerp, Sept. 22-29, 1 case.

Canada: Yukon Territory, Dawson, Sept. 24, 4 cases.

Egypt: Cairo, Sept. 23-30, 1 death.

England: Liverpool, Sept. 30-Oct. 6, 4 cases; London, Sept. 22-Oct. 6, 3 cases; Southampton, Sept. 30-Oct. 6, 4 cases; West Hartlepool, Sept. 30-Oct. 6, 3 cases.

France: Paris, Sept. 23-30, 7 deaths.

Gibraltar, Oct. 1-7, 1 case.

Greece: Athens, Sept. 30-Oct. 6, 2 cases.

India: Bombay, Sept. 18-25, 1 death; Calcutta, Sept. 15-22, 6 deaths; Madras, Sept. 15-21, 2 deaths.

Italy: Sorrento, Oct. 10, generally prevalent.

Japan: Formosa, Aug. 1-31, 1 case.

Mexico: Vera Cruz, Oct. 6-20, 2 deaths.

Russia: Moscow, Sept. 22-29, 2 cases, 1 death; Odessa, Sept. 30-Oct. 6, 10 cases, 1 death; St. Petersburg, Sept. 22-29, 7 cases; Warsaw, Sept. 15-29, 22 deaths.

Scotland: Glasgow, Oct. 5-22, 25 cases, 1 death.

YELLOW FEVER.

Columbia: Bocas del Toro, Oct. 22, 1 case.

Cuba: Havana, Oct. 6-13, 18 deaths.

Mexico: Tampico, Oct. 7-14, 3 cases, 1 death; Vera Cruz, Oct. 6-20, 13 deaths.

CHOLERA.

India: Bombay, Sept. 18-25, 64 deaths; Calcutta, Sept. 15-22, 7 deaths; Madras, Sept. 15-22, 51 deaths.

Japan: Nagasaki, Sept. 11-20, 1 case.

PLAGUE—UNITED STATES.

California: San Francisco, Oct. 5-10, 2 cases bacteriologically confirmed.

PLAGUE—FOREIGN AND INSULAR.

China: Hong Kong, Aug. 18-Sept. 1, 13 cases.

Egypt: Alexandria, Sept. 17-24, 2 cases, 1 death.

India: Bombay, Sept. 18-25, 89 deaths; Calcutta, Sept. 15-22, 24 deaths.

Japan: Formosa, Aug. 1-31, 4 cases, 3 deaths; Kobe, Oct. 23, present.

Scotland: Glasgow, Sept. 30-Oct. 6, 1 death.

Wales: Llandoff, Oct. 11, 1 case on steamship *South Garth* from the River Platte.

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